

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/ employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajasingh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conducive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.

CHAPTER- II

REVIEW OF RELATED STUDIES

2.0 INTRODUCTION

The researcher reviewed related studies and came across 33 research studies related to the present study. All the reviewed research studies were under four categories as follows.

- 1) Studies related to Accreditation Process
- 2) Studies related to Perspective to Accreditation
- 3) Studies related to Analysis of Performance Analysis and Performance Scores of institutions in terms of quality
- 4) Studies related to Accreditation Impact.

Studied related to the research were reviewed in terms of major objective, type of study, population, sample, tools, data collection, data analysis, and major findings.

2.1 REVIEW OF RELATED STUDIES

2.1.1 Studies related to Accreditation Process

The review of related studies under the research area Accreditation Process included five research studies.

Trivedi (1965) conducted a survey on the critical inquiry of India's secondary school inspection system. The study's main objective was to critically investigate the growth of the inspection of secondary schools in different states in India and suggest both the direction and foundation of its reorientation or even reconstruction. The sample was 14 directors of education, 30 school inspectors, 30 educationists, 30 headmasters, and 30 teachers. The data were collected from government and other records, and responses of questionnaires and interviews from the sample.

The study indicated that 13 states had 303 inspecting officers for 16,725 secondary schools, which showed 55.3 average secondary schools per one inspecting officer. The interviewees expressed that the approach of inspecting officers was friendly and educative, who did not adopt fault finding method for inspection. At the same time, the headmasters reacted that there were too many controlled exercises on them by inspectors. Headmasters and teachers expressed the inspection system as mechanical, hurried, surface level, and not in use. The Headmasters and teachers opined that the inspectors were not policymakers but executive officers only.

The study found the inspecting officers having low caliber and absence of flexibility, simplicity and coordination in their inspections. The inspectors were found merely

auditing and examining the school records instead of being an educational leader, guide and advisor to the school. The schools found have objections to inspectors' methods of inspection. The Inspectors were too much concerned with administrative aspects and performing autocratic inspection than education. The practice of visiting classrooms was also found hurriedly and arranged teachers' meetings for a while only. The study revealed the inadequacy of staff, and their appointment required a better system of selection and training of inspecting officers. Very few states were found giving prepared inspection forms as inspection reports. Even the existing forms were too inadequate to meet the needs of the school inspection. The inspectors were found to be subjective in filling out the forms, and the reports were not scientific and objective. The study suggested measures for school inspection such as (i) full inspection at an interval of three or five years and periodical surprise visits to schools with a view to classroom teaching. (ii) to pay attention and to check the follow-up work and (iii) objective standards in writing the reports.

Pillai and Srinivas (2006) conducted a research study as a meta-evaluation of the NAAC processes and procedures in terms of the post-accreditation scenario in the north-eastern region of India. The researchers conducted the study by NAAC to find out the acceptability and impact of its AA on institutions in the post-accreditation scenario in the north-eastern region of India. The study was a meta-evaluation study. About 150 principals of accredited colleges provided feedback in form of their opinions on the processes and procedures of NAAC on some relevant aspects. The feedback reflected the meta-evaluation criteria of comprehension, clarity, relevance, utility and effort to determine the validity and efficacy of the evaluation procedure.

The study revealed that the principals appreciated the readiness of NAAC for responding to queries and clarities to doubts of institutions at every stage. Majority of the institutions expressed satisfaction with the composition of the peer team for assessment. A few institutions explicitly stated that the peer team was very cooperative, and they had collected all information necessary for an objective evaluation. The discussions between the visiting team and the various constituents of the institutions were found always centered on enhancing the quality of education in the institutions. The peer team visits enabled the institutions to understand the value of cooperation and the involvement of parents and alumni and realise their importance in the growth and development of the institution. One of the 'B' graded colleges opined that the assessment work was done hastily by the peer team, which spent only one day visiting

their college, though there were three streams of Arts, Commerce and Science. During the peer team visit, four institutions expressed that the peer team functioned like inspectors. One institution opined that the Chairman was aggressive, dictatorial and only fault-finding, who dominated the other two members. In another institution, the Chairman and Member were passive observers, while the Member Coordinator was very active and had taken over the other two jobs.

As a post-accreditation quality maintenance activity, more than half of those accredited colleges constituted an IQAC. As follow-up actions, many institutions strengthened their infrastructure, constructed new buildings, computerised libraries, modernised laboratories, made more participatory and interactive teaching-learning, constituted various committees, updated records and executed planned programmes. Some of the institutions initiated steps like an increase in the number of teaching days, remedial coaching and special attention to advanced learners. Many colleges introduced job-oriented, skill-oriented, needs-based parallel courses. The institutions benefitted due to the peer team visit and accreditation. They became aware of the need for quality education, obtained a clear perspective on functioning, and increased stakeholders' participation. The teaching staff became confident and motivated to develop innovative methods, use modern techniques, and take research programmes.

The principals suggested improvement in the NAAC's methodologies and instruments for assessment. The study revealed contradictory views about deputing the same peer team to all institutions located within the same town. Few principals expressed that visits of the same peer team in all institutions of a town reduced the seriousness of the process and increased the scope for complacency. In contrast, many principals expressed that the same teams avoided inter-team variation and excluded differences in individual assessments. Proper training was required for those experts to minimize inter-team variance. Even the study has also pointed out the need for continuous introspection to minimize the inter-team variance and maximize the objectivity of the instrument for AA. The two-day peer team visit was also indicated too short for a comprehensive assessment of various activities undertaken by the colleges. The principals of urban colleges opined on emphasising value education in the evaluation of Institutions. A separate unit might be constituted in the universities to assess the follow-up actions. Fine-tuning of the instrument and more focus on teaching and learning were suggested for objective assessment in Punjab.

Kaur and Sharma (2012) conducted a survey on AA Criteria of NAAC for Colleges of Education in Punjab. Objectives of the study were to critically analyse the present criteria for AA for Colleges of Education as followed by NAAC in the light of the colleges' needs and limitations; to study the present level of quality consciousness and initiatives undertaken by those Colleges for improving the quality of Teacher Education after NAAC accreditation, and to give suggestions to improve the existing criteria of NAAC for AA for Colleges of Education. The sample was 75 Colleges of Education and 03 Universities (where the Department of Education exists) in Punjab assessed and accredited by NAAC till 2011. Self-constructed questionnaires were used to collect the data for the study. The study utilised a t-test and calculation of Average for data analysis.

The study found that the Colleges of Education were significantly demanded separate criteria for AA of Colleges of Education by NAAC. The findings of the study showed that Majority of the Colleges of Education were unaware about other different Accrediting Boards for Assessment and Accreditation of different Institutions of Higher Education in India, and nearly half of the Colleges of Education were unaware about the first step of Assessment and Accrediting process of NAAC i.e., Letter of Intent (LoI). Majority of Colleges of Education took initiatives in their colleges to improve the quality of Teacher Education after NAAC accreditation. About 80 percent of the Colleges started with new programmes, i.e., Elementary Teacher Training (ETT) course, Faculty Development Programme (FDP) etc. and 60 percent of the Colleges had started add on courses, i.e., Arts, Music, and Computers etc.

The suggestions provided by Heads and Faculties of the Colleges of Education to improve the present criteria of NAAC were needed for separate criteria of AA exclusively for Colleges of education; ICT/ Technology Packages as a part of the main key aspect of Teaching-Learning and Evaluation or a separate key aspect; emphasise on foreign curriculum integration and ICT integration in Innovative practices; more practical for students' mentoring and support; weightage to Distance education courses in assessment criteria; surprise visit by the NAAC after accreditation to check quality benchmarks; no relaxation for quality of teachers and physical infrastructure etc.

Gagare (2014) conducted a case study on NAAC. Objectives of the study were to study the need for the establishment of NAAC; to study the methodology, criteria, grading systems, implication of AA by NAAC; to find the number of institutions assessed and accredited by NAAC and their grades by Feb 2008; and to study and

suggest healthy/innovative practices. The researcher studied the methodology, criteria, grading systems, implication of AA by NAAC. The implications were studied by taking interviews of four persons belonging to the institution and working in different capacities in the process of AA by NAAC. The star grading system did not study in detail in the study.

The study found that the methodology used in the year 2008 was superior to the previous methodology. Every institution and university must do a Strength, Weakness, Opportunity and Threats (SWOT) analysis. The AA by NAAC was recommended essential for better quality in teaching-learning and other aspects. Proper study about the process, methodology and criteria of AA and grading system by NAAC also indicated inevitable for better accreditation of every college. The need for Internal Quality Assurance Cell (IQAC) in each college was suggested. The possibility of getting good accreditation increased in institutions that submitted minor research projects, well-qualified staff, nice teamwork, and satisfactory research work. The involvement of eminent scientists, industrialists, academicians, corporate heads, doctors, engineers, writers and performing artists got better accreditation. The study revealed the highest number of accredited colleges in Maharashtra state than any other state in India.

The study provided suggestions and emphasised the need to test the quality of teachers teaching in the process of AA. The Traveling Allowance (TA) of Peer Team members was usually borne by the colleges, which was sometimes very costly. There were few suggestions for colleges in terms of better accreditation. The colleges should meticulously study the whole process of assessment & accreditation by NAAC in detail and work on Self Study Report (SSR); colleges must improve in research, extension alumni association, and quality of teaching. The employed, healthy practices and strengths of well-accredited colleges were highly qualified and dedicated staff, separate work station for office staff, reputed top management with full support, the conducive-healthy atmosphere in library and classes, computer center and library with an excellent collection of books. The weaknesses of lower grade accredited colleges were paucity of adequate funds for developmental activities, space constraints- especially rooms and absence of an effective management informative system of the college.

Snyder (2015) conducted a case study on revising the Iowa Accreditation Process for community colleges in Iowa, United States. The purpose of the study was about collection, documentation and analysis of the data used for revising the state

accreditation process. It was aligned more effectively with the February 2005 revisions in the North Central Association of Colleges and Schools- Higher Learning Commission (NCA-HLC) to include their new criteria, core components, patterns of evidence, and the accreditation processes. The researcher used a purposive sample which included two community college presidents, who served in an advisory capacity of the Task Force, an Iowa Association of Community Colleges Trustee (IACCT) administrator, chief academic officers, chief student services officers, career and technical education Deans, an associate of arts/ associate of science Deans, faculties, institutional research directors, and librarians. Data were collected using interviews in both ways- tape recording and hand recording.

The study found four major themes supported revisions in the criteria and state accreditation processes- (a) Accreditation was a process that assures a minimum threshold of quality in higher education; (b) Academic Quality Improvement Programme (AQIP) became the preferred NCA-HLC accreditation process among Iowa community colleges; (c) the Iowa Department of Education's (DE) Division of Community Colleges and Workforce Preparation accreditation process for Iowa's community colleges should align more closely with the NCA-HLC process to include both Programmes to Evaluate and Advance Quality (PEAQ) and AQIP, and (d) the state accreditation process added value to Iowa's community colleges. Three minor themes for revision were (a) assessment of student learning was an integral part of the accreditation process; (b) state standards referenced in the Code of Iowa need to be included in the state accreditation process, and (c) the state accreditation process enabled community colleges to share best practices and benchmarks with peer institutions.

The results of the study supported revisions to the Iowa Administrative Rules that helped Iowa Code sections 260C.47- Accreditation of Community college programmes, and 260C.48- Standard for accrediting community college programmes. In addition, findings of the study supported revisions to the current Guide for State Accreditation of Iowa Community Colleges.

2.1.2 Studies related to Perspective to Accreditation

The review of five studies related to Perspective to Accreditation is given below.

Sosa Lliteras (2002) conducted a study on Principals' and teachers' attitudes towards the General Council on Education (GCE) accreditation process in Puerto Rico [A Caribbean Island and unincorporated United States (US) Territory]. The study aimed to

analyse principals' and teachers' attitudes towards the GCE's accreditation process and the degree to which they believed that the accreditation process has helped the school improve. The study was a self-reporting type of descriptive research. The Guide for Accrediting Educational Institutions included 225 quality indicators for receiving accreditation. The researcher identified 36 essential indicators divided into five fundamental areas- student performance, teachers and staff development, educational offering, school and principals' leadership and community. About 19 principals and 221 teachers from 19 GCE accredited schools from Fajardo Educational Region in Puerto Rico were sampled using systematic random sampling. The researcher has constructed a questionnaire containing questions related to the demographic information of respondents and the accreditation process. The questionnaire included items to be responded to in four-point Likert type scaling.

The study found positive and strong agreement between the attitudes of Majority of the principals and teachers about the GCE accreditation process. They opined significant steps in improving the quality of the school. Majority of the principals and teachers strongly agreed with different stages of the accreditation process and the noticeable benefits of accreditation in the fundamental areas of the educational process. The study indicated a lower level of agreement of teachers than the principals about the accreditation process's effectiveness in improving students' instructional programme and school-community relationships. A significant difference was not found between Principals' and teachers' attitudes towards potential barriers to the success of the accreditation process. In case of the potential barriers, most principals and teachers agreed about having the expertise of the evaluation committee needed to accomplish responsibilities in reviewing the school. More than half of the principals and teachers agreed about the high cost of the accreditation process. The participants did not resist being evaluated by an outside agency. Most principals and teachers disagreed about the lack of adequate knowledge of participants and lack of time as barriers. About the potential barrier to the accreditation process, some respondents commented on the questionnaire. Majority of them recommended annual reviews over three years. Some respondents gave remarks about the accreditation like extra workload for teachers and staff; too long and too time-consuming process; and in some cases too expensive, the sacrifice of students learning time and excessive paperwork.

Anzoise (2006) conducted a case study of the Universidad Tecnológica Nacional (National Technological University) (UTN) in the Argentine Republic in terms of the

senior administrators and department chairs' perspective to the accreditation process in schools of engineering. The objective of the study was to investigate the strengths and weaknesses of the implementation of the accreditation process in Argentine Schools of Engineering. About 31 senior academic administrators and 51 faculty department chairpersons were selected as a sample from the engineering department of the 22 engineering schools and five academic units of the UTN. The data were collected using a questionnaire and drawn findings in terms of three research questions framed for the study.

The accreditation was perceived as useful and important for improvement in the schools of engineering of the UTN. The peer profile and indicators did not impact the accreditation process, and accreditation demanded a reorganisation of the institution and/ or departments. Even a gap was found between the perceptions of the senior administrators and the chairpersons, which expressed doubts of the chairpersons about the future of the accreditation system. The outcome assessment of students was also accepted as part of the accreditation process. Mixed information was found about the interest in other quality initiatives. The accreditation triggered the interest for other quality initiatives, but success factors were not strong enough to support their development. The senior administrators needed to communicate with a better understanding of their chairpersons about the planning activities to support the accreditation process. The effectiveness of other planning activities was depended on the communication system and dealing with various groups inside and outside the university about accreditation issues. The internal success factors were found with a higher impact than the external success factors in the accreditation process. The five internal success factors for the Accreditation Process were rated as making a large impact in terms of faculty and administrators, i.e., publicly stated support to the accreditation process, increased interest in quality initiatives, knowledge of the accreditation process, knowledge about quality in the institution, and increased understanding of the need of change. The two external success factors rated as making no impact were governmental pressure for accreditation of the school and public perception of dissatisfaction with higher education in the course. The top three resistance factors to the accreditation process were cultural resistance, organisational barriers, and threats to power and influence. The new success factors in the accreditation process were student participation in the accreditation process, opportunity to develop institutional self-esteem, faculty self-esteem for obtaining

accreditation status, and students did not want to lose the earned credits. The different perspectives of students and senior administrators about the accreditation process were also a new resistance factor.

The senior administrators and departmental chairpersons had similar perceptions about the importance of the accreditation criteria. The five accreditation criteria were not all rated with the same significance for the accreditation process. The ranking of their reputation was infrastructure and laboratories, curricula and professional preparation, institutional context, faculty, and students and alumni. The problems reported by senior administrators during the accreditation process were preparing the Self-study reports, designation of the Peer Committee and its acceptance, and Review and Action. The most important problems provided by the respondents were the inadequate profile of the peer committee members and inadequate criteria to evaluate schools of engineering, while needed for improvement in the performance of the Peer Committee. The other problems were lack of adequate information about the quality indicators, the inadequacy of the software to upload the institutional information and the institutional self-evaluation, economic reality of the school of engineering, and the high percentage of commuter students. The senior administrators and chairpersons strongly criticised the absence of engineers in the Executive Board, the lack of adequate criteria to evaluate the accreditation reports and grant the appropriate accreditation status, and the acceptance of political pressures. Cooperation was found between faculty and senior administrators in terms of the Accreditation process. The accreditation budget was small, but it did not impact other activities.

The study found a significant difference in the perceptions of accreditation between senior administrators and chairpersons about the importance of the accreditation process. The senior academic administrators focused on the public image of the institution as well as internal and external prejudices. At the same time, the chairpersons concentrated on the process itself, such as accreditation indicators, peer evaluators, institutional reorganisation, relationship with senior administrators, study plans and communication with other departments.

The respondents emphasised the improvement of the Accreditation Process rather than the improvement of the current criteria in the accreditation standards, where the chairpersons recommended more than the senior administrators. They recommended need to provide adequate training for developing homogeneous evaluation criteria and knowledge of engineering schools. The other recommendations were review of the

information and actions of the accreditation body; the need to fit the accreditation criteria with the reality of the engineering schools; the need to address the student-outcome more than equipment and infrastructure; the need to consider the social-economic environment; the need to include engineers in the board of the national accreditation body; and to make the accreditation body independent of political pressure related to favorable accreditation results.

Rajas Singh (2009) conducted a survey on Quality Assessment in Higher Education. The major objectives of the study were to develop a unique quality measurement tool to measure the perceptions of various stakeholders on the quality of students and faculties of higher education in India; to determine the perception gap between the various stakeholders on the quality of higher education in India; and to determine the effect of demographic variables on perceptions of stakeholders. The sample of 200 faculties, 487 students, 160 alumni and 100 Industry personnel were selected randomly from six different Engineering colleges from Tamilnadu. A questionnaire was constructed using a five-point Likert scale containing 23 items for students and 18 for faculties to measure their quality perceptions.

The study found very high perception gaps between the industries and faculty factors such as generic skills, academic preparedness pertaining to the quality of students, presentation skills, and interpersonal skills relevant to the quality of faculty. The study found a very high deviation between the perception of industries and students on learning skills, employment competence and academic preparedness concerning the quality of students. In contrast, presentation skills, interpersonal skills and social responsibility were found relevant to the quality of faculty. A significantly high perceptual deviation was found between the industry and alumni on factors such as generic skills and communication skills for the quality of students. A vast difference was found between the perceptions of both on academic competence relevant to the quality of faculty. The deviation between the perceptions of faculty and students was found to be significant on factors such as generic skills, academic performance, learning skills and academic preparedness pertaining to the quality of students; and a vast difference was found between the perceptions of both on presentation skills and academic competence relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic

competence and interpersonal skills relevant to the quality of faculty. A significantly high perceptual deviation was found between the alumni and students on factors such as academic preparedness, employment competence, learning skills, generic skills and academic performance for quality of students; and a large difference was found between the perceptions of both on academic competence, presentation skills, interpersonal skills and social responsibility relevant to the quality of faculty. The study found a significant relationship between age, educational qualification and industrial experience of the industry personnel; age, year of passing and industrial expertise of the industry personnel; and educational qualifications of the industry personnel and their perceptions respectively on the quality in academic performance, intelligence and learning skills of higher education in India.

Joicy (2011) surveyed student-teacher and teacher educators' perceptions of the realisation of quality indices in secondary TEP. The study's objectives were to find out opinions of student-teachers and teacher educators towards the quality indices in STEP and compare those opinions in terms of some variables towards the realisation of quality indices in STEP. About 250 student-teachers and 50 teacher educators from 10 colleges in the West Godavari District of Andhra Pradesh were selected randomly for the study. Data were analysed calculating measures of central tendency, t-test and Analysis of Variance (ANOVA). Opinionnaire for student-teachers and teacher educators was developed using five alternative responses.

The study found the overall realisation of quality indices in STEP by student-teachers and teacher educators to a high extent. Student-teachers and teacher educators expressed a very high accomplishment of the quality indices in the entrance examination, admission and the number of working days; objectives of the course, curriculum transaction and timetable; competency and commitment of the teacher educators; project work and practicum; curricular and extracurricular activities; and examinations, evaluation and outcome of the course. A very low accomplishment of the quality indices opined by student-teachers and teacher educators in practice teaching and mentoring the student teachers. Only institutional infrastructure and facilities were expressed very high accomplishment of the quality indices by the teacher educators, while very low by the student teachers. The study found a significant difference between the opinions of student-teachers and teacher educators for entrance, admissions and number of working days, objectives of the course, institutional infrastructure and facilities and competency, and commitment of faculty members. A

significant difference between the opinions of male and female student-teachers was found with respect to objectives of the course, institutional infrastructure and facilities, competency and commitment of faculty members, curricular and extracurricular activities, and total quality. A significant difference was found between the opinions of the student-teachers of private and minority colleges' management for project work and practical records and examination and evaluation. At the same time, a significant difference did not found between the opinions of student-teachers below and above 25 years age groups and degree and postgraduate educational qualifications for all areas towards the quality indices in STEP in colleges of West Godavari District.

A significant difference was found between the opinions of married and unmarried and under and above ₹1,00,000/- income group teacher educators in project work and practical records. Significant difference did not found between opinions of teacher educators in terms of all age groups (under 25 years, between 26 to 45 years and above 45 years age); professional qualification of M.Ed., M.Phil., Ph.D.; designation of lecturer and Principal; all teaching experience (below five years, between 6 to 10 years and above 11 years); teaching methodologies for Telugu, English, Maths, Physical Science, Biological Science and Social Studies; and private and minority college management.

Ulmer (2015) studied teachers' attitudes toward the accreditation process and professional development in accreditation outcome scores. The study's objectives were to investigate teachers' attitudes toward the school accreditation process and professional development and the interaction between variables regarding the school accreditation outcome scores. It was a quantitative casual-comparative study. The sample was 61 teachers from four schools accredited by Advancing Excellence in Education Worldwide (AdvancED), United States of America (USA). The researcher used a questionnaire to measure the positive or negative attitudes of school teachers.

The study found that the accreditation scores were significantly higher in teachers with a positive attitude towards the accreditation process than teachers with a negative attitude. The recommended practices for accreditation processes were providing continuous resources to teachers from stakeholders; involvement of educational leaders in the accreditation processes for enabling teachers to focus on continuous improvement and student achievement.

2.1.3 Studies related to Performance Analysis and Performance Scores of institutions in terms of quality

The research area 'Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality' included a review of 16 research studies. Twelve studies were in form of State-wise Analysis of NAAC Accreditation Reports conducted by different researchers about NAAC in India, while the other four studies were individual researches.

Desai (1966) conducted a study on the evaluation of secondary schools of Gujarat, Saurashtra and Kutch. Objectives of the study were- to conduct an evaluative survey on the present position of secondary schools of Gujarat state with regards to goals and purposes, physical facilities, curricular programmes, administration and organisation, school-community relationship and pupil welfare; to study the present position of secondary schools in various aspects in the light of the recommendations of the secondary school commission, and to study some existing problems connected with secondary schools to offer suggestions to the various agencies associated with secondary schools. About 120 out of 768 secondary schools from 17 districts were selected as a sample for the study. The researcher used observation, interview and to collect data. The literature was reviewed for two purposes- to study the present position of secondary education and secondary schools in India and Gujarat in particular; and to develop the criteria for evaluating secondary schools.

The study found that Majority of the schools accepted their purposes for secondary education as to give character training, help emotional, physical and mental development, and develop literary, and artistic and cultural intents. The school principals and teachers lacked a fundamental understanding of the purposes mentioned above. So it wasn't easy to fulfill the purposes. Missionaries and public trust schools were found better than the rest of the agencies. Physical facilities of schools were found quite satisfactory in terms of durable building, classrooms, benches, playground, adequate room facilities and material storage facilities. Some schools did not have proper facilities of toilet-lavatory and drinking water. The available material was not used effectively.

Majority of schools were functioned by competent members of the school management committee. Records were maintained properly by Majority of the schools. Half a number of the schools planned the school budget. Very few schools did advanced planning for school schedules. Recruitment of teachers was found mainly based on

professional qualifications. The conditions of services were found satisfactory. Teaching work was allotted on the basis of teachers' first degree or professional degree. Majority of schools were found following the Gujarat state prescribed syllabus. The curriculum appeared stereotyped and monotonous. The objectives of the school subjects were not understood properly by Majority of the teachers, which resulted in improper planning for learning experiences, instructional activities and use of community resources. Use of the library by Teachers was also found to a very lesser extent. The separate timetable for co-curricular activities was not followed strictly, and very fewer students had participated. Very few schools utilised internal assessment. Majority of the schools did not have counselors and no proper provision for guidance. Children of parents with income of less than ₹1200/- found receiving free education, 5-10 percent pupils received scholarships, and poor students received books and clothes.

Katre and Pillai (2004) conducted a State-wise Analysis of Accreditation Reports of Karnataka. The objectives of the study were to study the PTRs from the point of view of the quality enhancement of higher education; to find out and enlist the common issues and their solutions based upon the data from the PTRs and ideas and suggestions from the interactions mentioned earlier; and to make recommendations to the state government, university and other relevant agencies. The PTRs and NAAC Accreditation Grade sheets of individual institutions were analysed in the study using both statistical calculations and content analysis. About eight Universities and 69 Colleges of Karnataka out of 94 Universities and 448 Colleges in India were accredited by NAAC on 29th April 2003. Only one Education College was accredited during this period in Karnataka.

The NAAC has accredited HEIs using a marking and grading system along with criteria. The first accreditation method was percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method was percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****); the third accreditation method was the same percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++).

The study found that 3.90 percent of the institutions of the State were accredited under the first system of gradation, 45.45 percent were accredited under the star-grading system, and 50.65 percent were accredited under the nine-point scale. The overall scores of institutions assessed under the nine-point grading system of AA appeared to

be rather high compared to those of the other two systems. Seventy-four percent of the institutions of the Karnataka State secured overall scores of 70 percent or more. The highest overall percentage under grade 'A' was secured by an Arts college, while two Arts/Science and Commerce colleges secured the lowest average overall score. The average overall score of all the 77 institutions was 72 percent, which indicated an overall good quality index of higher education of the State, even there was scope for further quality enhancement.

The overall analyses of criterion-wise scores of institutions revealed the need for extending academic freedom to institutions for the development of the Curricular Aspects criterion. For all other institutions, except the Language-specific University, there was ample scope for developing innovative teaching-learning methods and evaluation and the need for overall strengthening Research, Consultancy and Extension. The overall facilities under Infrastructure and Learning Resources were good; even there was a necessity to further strengthen them, especially in affiliated colleges. Improvements were suggestive under Student Support and Progression for two-faculty colleges, science colleges and even traditional universities. Most institutions had secured high scores under the criterion Organisation and Management, except the two-faculty colleges. The researchers did not consider the criterion Healthy Practices for an overall accreditation rating of the institution. Weightage for this criterion was revealed the same for different categories of institutions. The contents of this criterion were found largely based on subjective and impressionistic views of the peer team members. Nearly half of the institutions were needed for adopting strategic planning and recommended all institutions to design and implement a time-bound perspective vision document to that plan and its implementation with appropriate financial allocations. The study found recommendations for mandatory revision of syllabi once every two years by a Central Syllabus Committee other than the (Board of Studies) BOS; an appropriate counselling service to students during and immediately after admission; more organised Teacher-performance-enhancement endeavors; appropriate academic linkages with Inter and Intra University, similar departments and private organisations; timely recruitment of qualified teachers; encouragement and preparation of faculties for developing group activities; community services, tutorials and remedial coaching for students; 100 percent continuous assessment, optimal utilisation of the infrastructure, library resources and facilities; student-friendly administration; student feedback on faculty performance; and set up Parent-teacher and Alumni associations. The study

suggested a central research planning, development and management board be set up, research to be undertaken by all the teachers, provision for external research funding and internal research fellowships to teachers. The peer team expected that all recommendations in PTR should be complied with by an institution within a definite time frame.

Pillai, Madhukar and Srinivas (2004) conducted an Analysis of NAAC Quality Assessment of Higher Education in North-East states of India. The study was undertaken on NAAC accredited institutions of seven North-East states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. The main purpose of this study was to identify the common issues and the possible solutions/recommendations reflected in the PTRs of NAAC accredited institutions of North East states. NAAC accredited seven universities and 158 colleges of the North East states by 4th November 2004. The overall scores and criterion-wise scores and recommendations/ concerns, commendations as denoted in every PTR were analysed using quantitative and qualitative techniques.

The study indicated that three colleges were accredited under the star-grading system, whereas 155 colleges were accredited under the nine-point grading system. The highest number of colleges accredited under B grade. The average overall score of all the accredited colleges was 73 percent. The analysis of criteria-wise scores of all the accredited colleges indicated nearly the same scores in all criteria other than the criteria Research, Consultancy and Extension; and Infrastructure and Learning Resources.

The study's findings revealed that few Universities did not have yet adopted the model curriculum developed by UGC; most of the PG courses were on the self-financing basis with temporary faculty; only some colleges were offering job-oriented certificate courses, and the colleges were catering to local higher educational needs. Most of the teaching methods were conventional; few colleges were found conducting internal tests; 30 percent of part-time/ad-hoc teachers teaching and the performance appraisal of teachers was occasional. Many colleges were found well engaged in extension activities. Few teachers were found involved in research activities, where most of the colleges lack consultancy services. Some colleges had 'Poor students fund,' very few colleges had employment cell, and placement officers and some colleges conducted remedial coaching for academically disadvantaged students. The college principal was the member secretary of the college Governing Body, and many colleges constituted sub-committees for the decentralisation of college administration. Some colleges had

established planning boards to monitor development. Administration and finance works were not computerised, and the fee charged by colleges was affordable to students.

The study found that NAAC recommended colleges frame and revise the syllabus, seriously assess and properly evaluate students, use modern teaching aids, prepare teaching plans, communicate answer scripts and results to the parents/students, organise the tutorial system and establish students' feedback mechanism. The colleges were recommended for obtaining research projects from apex agencies, leave/duty leave might be avail for research studies, the constitution of an 'Extension Activity Cell,' budgetary provision for student support services, more scholarships and freeships to talented students, the establishment of placement-career guidance cell, students counselling center and student grievance cell, special coaching for competitive examinations, proper attention to the alarming drop-out rate in colleges of some areas, some kind of autonomy to government colleges etc.

The Healthy Practices were the quality of teaching and research activities fostered by the subject societies in the colleges, generation of the resource by farming the vacant land of the college; collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs; computer courses conducted by Center for Development of Advanced Computing (CDAC); decentralised administrative work; use of the library, laboratory and other resources by outsiders; and students feedback and continuous internal evaluation.

Pillai and Rama (2004) analysed the PTRs on Institutional Accreditation of the Higher Education Institutions in Haryana state. The study's objectives were to help management and staff for evolving practices to improve institutional performance, provide inputs to the policymakers, provide feedback to the stakeholders, and input to the funding and regulatory councils and NAAC.

The study analysed all the PTRs of 137 colleges and three universities accredited by NAAC in Haryana. Out of 137 colleges, 17 were professional colleges that offered TEPs, and the rest 120 were non-professional colleges that offered courses in Science, Arts and Commerce. The researchers analysed the PTRs and the criterion-wise and overall scores allotted to individual colleges of the universities of Haryana.

The TEIs scored comparatively higher than the General Education Colleges. The colleges of education secured the highest overall score, 'A+' from all 37 colleges. Private colleges received better grades in comparison to government colleges. The Private colleges were found significantly superior to Government Colleges on criteria

Curricular Aspect, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Student Support and Progression, Organisation and Management, Healthy Practices, and overall. In contrast, found low status on the criterion Research, Consultancy and Extension for both Government and Private Colleges.

The analysis of PTRs of TEIs revealed that the Teachers needed to go beyond the lecture method and adopt new teaching techniques for more pro-interactive teaching. The study recommended for mandatory tutorial system and introduction of internship at all levels of teacher training. The TEIs were suggested to set up rural training centers; and more intensive and guided Practice teaching. Self-appraisal, Peer appraisal and Student appraisal of faculty performance should be made mandatory for strengthening curricular transaction and evaluation. The Peer Team suggested using ICT for teaching, need-based extension activities, innovative teaching practices, setting up an IQAC, participation of teaching faculty in seminars, and strategic planning for the institution's overall performance. The study recommended strengthening Infrastructure and Learning Resources for language laboratories, library facilities, a Computer Center with the internet, a Local Area Network (LAN) facility, and providing training to teacher-trainees for the use of Multimedia tools. There was a requirement to establish a placement cell and alumni association, link to practice teaching schools, computer training to office staff, equip colleges for modern management practices etc.

Pradhan, Stella and Patil (2004) analysed NAAC accreditation reports of the Higher Education Institutions of Maharashtra state. The PTRs of 797 accredited HEIs of Maharashtra state were accredited by September 2004. PTRs of those HEIs were analysed quantitatively and qualitatively. NAAC has accredited 2, 23 and 787 institutions respectively under the first grading system based on ten criteria: star-grading and nine-point scale systems in Maharashtra.

The study revealed that 8 percent of institutions scored above A, 15 percent secured B++, 22 percent scored B+, and 24 percent scored B, whereas 29 percent were in C, C+ and C++. The overall average score of all urban colleges was 76.41, higher than the score of rural colleges, 70.03. The study compared the overall average scores for colleges under the nine universities zones. The universities' descending order of average scores was Shreemati Nathibai Damodar Thackersey (SNDT), Mumbai, Pune, Swami Ramanand Teerth Marathwada, Shivaji, North Maharashtra, Dr. Babasaheb Ambedkar Marathwada, Amravati and Nagpur University.

The overall average score of all 36 Education/Physical Education Colleges was 80.50, next to the medical colleges and more than the other professional colleges. In the professional colleges' category, 23.75 percent of the colleges secured an average score of 77.16, where 63 percent of the institutions scored more than 75. Six professional colleges were placed in the A+ category, where five were colleges of education, and one was Law College. The analysis of criterion-wise Scores of Professional Colleges revealed that most of the criteria were more or less similar, with the highest overall score of 74.81 for the Teaching-Learning and Evaluation criterion. In contrast, the Research, Consultancy and Extension and Healthy Practices criteria had low overall average scores of 66 and 69, respectively. Very high standard deviation in the criterion Healthy Practices indicated that some professional colleges were very strong, and others were very weak.

The study stated criterion-wise commendation to Education Colleges given by peer team. They observed clear-cut goals and objectives of colleges, the introduction of new postgraduate programmes, rigorous admission procedure, dedicated staff and students striving for excellence, fieldwork as an integral part of work curricula, efforts in producing workbooks, study manuals and computer-aided learning material. The study indicated that teachers did research work, despite several constraints, and some colleges' generation of the large amount through consultancy and contribution to policy development at state and national levels. The study found well-equipped modern laboratories, IT-enabled services on campus, effective use of infrastructure and facilities, placement and campus interviews, encouragement and support to the institutions by management etc. Healthy Practices were strict discipline, welfare schemes by institutions, commitment to service, team spirit, and constant monitoring of activities.

The major recommendations by the peer team for the Education colleges were to strengthen learner-centered pedagogy, inclusive education, initiate more action research projects, start a partnership between schools and education colleges for practice teaching, and adhere to NCTE norms. The study suggested socialised classroom techniques, team teaching, brainstorming, field visits, seminars, workshops, micro-macro teaching and the use of audio-visual techniques to be strengthened.

Sarkar, Aludiapillai, Varghese and Bajaj (2004) conducted an Analysis of NAAC Accredited Universities and colleges of Tamil Nadu state. The main purpose of the analysis was to identify the common issues and their possible solutions based on the

analysis of the data reflected in the peer team assessments. The study found 82 colleges and seven universities accredited by NAAC on 16th February 2004 in Tamil Nadu. Seventy-one colleges and six universities were accredited under the star-grading system, and 11 colleges and one university were accredited under the nine-point grading system. All the accredited HEIs were taken in this analysis. The researchers had analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The analysis found that most of the institutions' ranking was high in the quality of higher education. The private autonomous/private affiliated colleges scored higher than the government autonomous/affiliated colleges, where Majority of high-scored colleges were private. The Teachers Training Colleges were rated very high in accreditation.

The criterion-wise analysis revealed that the Teaching-learning and Evaluation and Infrastructure and Learning Resources criteria received the highest score; the criterion Curricular Aspects scored fairly high scores; the criteria Research, Consultancy and Extension and Healthy Practices scored lowest; while other remaining criteria scored average. The analysis of PTRs of Teacher Education Colleges found that the TEIs were ranked high whether they were private or government colleges, and 78 percent of them received a five-star status. Those institutions fared well in the criteria except the criteria Organisation and Management and Healthy Practices. Uniformity was found among most of TEIs in the quality of education.

The study indicated criterion-wise issues and recommendations in PTRs for quality improvement. Under the criterion Curricular Aspects, the issues were curriculum options, modular curriculum and autonomy for colleges. The curriculum was recommended for diversification, expert consultation, need-based innovative multi-disciplinary modular, CBCS and perspective plan. The teaching-learning evaluation, participative learning, and professional development training issues were suggested to appoint government-established chairs, remedial coaching, internal assessment, staff development, and student feedback. Suggestions were given to increase in the library, computers, internet facilities, teacher appraisals and incentive schemes. Under the issues 'limited research ambience, inadequate grants and no consultancy and extension', the peer teams recommended to bring change in the perception of management of universities and colleges to research and equip research laboratories, establish research management and development cell, encourage consultancy for faculty, establish national and international linkages, and mobilise funds from industries and other

sources for research and extension. For 'expansion and utilisation of infrastructure and provision for various facilities', the study recommended for improvement in infrastructural and internet facilities, accessible to faculty and students, and search for sponsorship schemes were given. In order to address the issue of 'student support progression, and strengthening the career guidance and counselling services', reorganisation of the existing manpower and resources, establishment of placement cell, establishment of linkage with other institutions and industries, and organisation of parent alumni association was suggested. The organisation and management were recommended for more participative management, leadership training programmes and autonomy, and decentralisation for effective functioning. In order to resolve the issue of performance with innovation, recommendations were given to find out innovative ideas, share them in meetings and seminars, and provide incentives for implementation. The NAAC also recommended undertaking pre-accreditation and post-accreditation counselling for quality improvement; training for curricular development and research management; liaison with the state government and UGC; and refinement in the measurement tools for assessment for better validity and reliability.

Sarkar, Rama and Manjunath (2004) conducted a study on state-wise analysis of Accreditation Reports of Institutions of West Bengal state. The study's main aim was to find out the status, including strengths and deficiencies, of Higher Education Institutions of West Bengal and suggest measures for removing the deficiencies. NAAC accredited seven universities and 47 colleges out of 15 universities and 460 colleges of West Bengal state. The number of accredited Education Colleges was three out of 30. Criterion-wise and overall qualitative analyses of the PTRs were carried out in the study.

In criterion-wise analysis, the peer team observed various short-term self-financing courses introduced with a vocational component. The most conventional teaching methods were found in non-science, and non-technical subjects were the talk and chalk method. Unbalanced teacher-taught was found in the big urban colleges and found vacant positions of teachers in many colleges. The drop-out rate was high in Science and technical subjects, although low in the self-financing courses. The infrastructure in government colleges fully supported by the government was much better than most of the aided colleges. The colleges were found giving information to the students about admission, attendance and examination via different sources, regular competitions; recent and fewer efforts for decreasing drop-outs; unstructured academic counselling

and occasional career and employment guidance; and stipends and scholarships to the students. The colleges constituted several permanent and temporary committees for administration, and most of the colleges had done efforts to establish IQACs. The Healthy Practices were economizing and cutting down unnecessary expenses, collecting funds from other sources, tying up with private providers for various professional programmes of training, short-term self-financing enrichment courses, MoUs with outside agencies for research and developmental support and healthy community life in the colleges.

The PTRs recommended having PG subjects in more colleges and the need for add-on, self-financing, PG Diploma and certificate courses in colleges. Teachers needed to adopt more student-friendly and interactive methods of teaching with more extensive use of modern teaching aids. The PTRs suggested the need for filling up of vacant teaching positions in colleges, the establishment of Research Councils and Research Development Cells in Colleges, expanding research culture, more books in the libraries, more computers to departments and in the labs, computerisation of libraries, sports facilities, expansion and better maintenance of hostels, approach to Non- Residents of India (NRI) alumni and attraction to them for resource generation and mobilisation, autonomy to colleges, strengthen mechanisms for more effective monitoring of the performance, the establishment of Career Guidance and Placement Cells, organisation of Campus interviews, and linkages with local industries for hands-on training and employment.

The criterion-wise analysis of PTR of Teacher Education Colleges revealed that the colleges followed university prescribed syllabus; working and teaching days more than NCTE norms; and regular seminars, workshops and other interactive academic sessions. The academic calendars scrupulously designed and pursued; teacher's annual self-appraisal; tests, assignments and project works to students; and workshops, orientation and refresher courses and various training to faculties. The colleges were found committed to the social upliftment of students and participation of all students in the outreach programmes. The colleges were found to have some scope for research, sharing excellent infrastructure facilities, well-equipped with books and journals, book-bank facility. The teaching consisted mostly of interactive lectures with used audio-visual aids, although assignments, project work, seminars, etc. also found in practice. The study found a 10 percent drop-out rate, while the success rate was high; strong and

active associations, but no alumni associations and no placement cell. The colleges had little administrative and financial autonomy.

Ummerkutty, Stella and Shyamasundar (2004) conducted an Analysis of NAAC Accredited universities and colleges of Kerala. The main purpose of the analysis of PTRs was to identify the common problems the affiliated colleges and universities face and recommend possible solutions involving actions by various stakeholder groups. NAAC accredited 61 colleges and four universities in Kerala. Forty-one colleges were accredited under the star-grading system, and 20 colleges were accredited under the nine-point grading system. All the accredited universities and colleges of Kerala took for analysis. The analysis report presented criterion-wise Analysis and Recommendations of PTRs.

The study found that more than half of the colleges were highly rated. The criterion-wise analysis revealed that many of the colleges did not have clear, well-defined vision and goals; most of the colleges had no perspective plans, where the highly-rated institutions had prepared plans. Almost all colleges were found following the syllabus provided by the university. Several highly rated colleges conducted regular midterm examinations. The study found chalk-and-talk and lecture method, limited use of modern teaching technology, inadequacy or absence of innovative teaching methods, lack of a proper link between the parent university and the affiliated colleges, no research culture and consultancy culture, remedial teaching for weak students in some colleges and tutorial system in few colleges. Some teachers had research degree, and very few continued their research after taking a higher research degree. Research culture and consultancy culture did not found in the colleges. Most of the accredited colleges had good infrastructure, and some had excellent facilities like adequate land, playgrounds, library etc. In a few highly-rated institutions, computer centers were organised fairly well. The Student Support and Progression did not attract the attention of authorities of most of the colleges. Few colleges had set up counselling centers, and some colleges had introduced job-related courses and made efforts to find placements for their graduates just before NAAC visit. The colleges were found controlled and managed by corporate managements, except government colleges. The Principals were not getting immediate help in the day-to-day running of the college. Several colleges were found to have healthy practices like getting a substantial financial package, setting up competitive exam centers, signing regular MoUs with neighbouring industries and

research institutions, arranging guest lectures, forming various clubs, and community services.

The PTRs recommended introducing semester patterns for all UG and PG courses and emphasised the need for continuous revision and formation of new life-related curricula, use of modern teaching methods and teaching technology, liaison between the college and university, submission of annual reports evolved by the universities etc. The PTRs suggested providing information to universities and the government about the innovative programmes and actions initiated by the colleges and incentives and recognition. Many PTRs suggested the formation of College Research Committees (CRCs) to encourage and coordinate research efforts by the teachers and more frequent liaison with the university and the faculties to be encouraged for research. The PTRs suggested for upgradation and modernisation of the library services, starting Central Computer Centre, forming Local Management Committees (LMC) in government Colleges, active participation of parents and Old Students' Association, and an immediate establishment of Quality Assurance Cell.

Katre, Pillai and Hegde (2005) conducted an analysis of Accreditation Reports of HEIs of Punjab state. The study's objectives were to study the quality enhancement of higher education, find out common issues and their solutions, make recommendations for quality improvements in higher education, find out measures, and determine courses of action for the implementation of the given recommendations. NAAC accredited four universities and 68 colleges in Punjab.

NAAC accredited three universities and two colleges under the star-grading system and a university and 66 colleges under the nine-point scale system. The overall distribution of grades amongst all the accredited colleges of Punjab indicated that 13 percent, 18 percent, 33 percent and 21 percent colleges graded A+, A, B++ and B+ respectively. The university-wise analysis revealed that 50 percent of the accredited colleges of Gurunanak Dev University were graded as A and A+; 68 percent of colleges of Panjab University secured B++ and A, and 66 percent of the Punjabi University colleges accredited with B+ and B++ grades. NAAC accreditation grade sheets and PTRs of NAAC accredited institutions of Punjab were analysed in the study.

The study carried out analyses of the faculty-wise distribution of average scores of institutions, which indicated that the Professional colleges had the best average overall score of 82.66 percent. In comparison, the faculty of Science and Commerce colleges had the least score of 63.25 percent. Majority of the colleges were in the overall score

interval of 80-85 percent. The criterion-wise performance indicated that most Institutions were equipped with appraisable Infrastructure and Learning Resources and provided a good teaching-learning experience to their students. At the same time, the Research Consultancy and Extension needed improvement.

The study conducted a qualitative analysis of a sample of 40 PTRs from all the 68 NAAC accredited colleges of Punjab in terms of 15 parameters specifically mentioned in those reports. The analysis revealed that Majority of the accredited colleges indicated effective leadership of the Principal, well-defined and well-executed vision statement of the institution, strong linkage with society/community, the adequate infrastructure of the institution, while inadequate computer access for students. Most of the colleges had good hostel facilities and few required to be improved, while few have not such facilities. Nearly half of the alumni associations contributed significantly to the development of their institutions, where some of the associations needed to be developed. The grievance redressal cells were found active in some colleges, where no major complaints were registered. Majority of the colleges were recommended to undertake research and project work, provide consultancy services, start the course on communication skills, and introduce a job-oriented course. From 21 out of those sampled colleges, the study found very few faculties in more than half of the colleges engaged in research, psychological counselling and career counselling cell.

Tripathi and Ponmudiraj (2005) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Madhya Pradesh (MP) state. The objectives were to provide guidelines for further improvement of higher educational institutions and understand the validity of the instrument applied by NAAC for the assessment process. Out of 752 colleges, only 42 had been assessed by NAAC up to May 25, 2005, in MP, where two colleges accredited under the star-grading system and 40 colleges accredited under the nine-point grading system. Most of the colleges accredited B+ and B grades, and none of the colleges graded A++. Out of those 42 colleges, 30 (75 percent) were government-funded colleges, and the rest were self-financing colleges. The overall scores and criterion-wise scores were analysed using quantitative techniques, while the commendations, recommendations and issues of concern were analysed using qualitative techniques.

From criterion-wise Appraisal, the study found that some of the accredited colleges were the best colleges of MP. Under a scheme of the Government of MP, few of those colleges had the status of 'Institution of Excellence'. The colleges offered traditional as

well as job-oriented courses. Students' feedback and continuous internal assessment exist in a few colleges, and most of the colleges were satisfactorily catering to local higher educational needs.

The criteria-wise analysis found academic merit-based admission, conventional teaching methods, teachers' less participation in seminars/workshops, vacant posts, shortage of competent teachers in self-financing colleges, transfers of teachers in government colleges, and internal tests in a few colleges. Few teachers were engaged in active research, where Majority of teachers in rural colleges were still hesitant or unaware of various funding agencies for research. Many colleges were well engaged in the extension activities. Government colleges had good infrastructural facilities, and some colleges had book bank schemes. Many colleges had Computer Centers, adequately equipped laboratories, while unsatisfactory maintenance of the hostel etc. The Principal was the member secretary of the college Governing Body, and many sub-committees constituted for decentralisation of college functioning. Some colleges had established Planning Boards to monitor development. The Healthy Practices were involvement of influential local people interested in the development of the college by '*Jan-Bhagidari Samiti*', creation of subject societies, new and relevant career-oriented courses, computer courses conducted by CDAC, decentralised administrative work, training of college students in disaster mitigations and rehabilitation, the introduction of Students' feedback, continuous internal evaluation etc.

The peer team recommended taking active steps in designing, revising or restructuring the syllabi; arranging frequent interaction with University Departments and nearby national institutes/organisations and industries; arranging interaction with academic peers and industry experts to introduce new courses; and introducing interdisciplinary, market needs and need-based professional courses. The peer team had suggested arrangement of frequent classroom tests, use of modern teaching aids, tutorial system, the introduction of semester system, encouragement to teachers for participation in seminars, minimize transfers of teachers in government colleges, preparation of teaching plans and mechanisms for monitoring the completion of the entire syllabi well in advance. The peer team suggested adequate awareness to teachers about the funding agencies; encouragement of teachers for full-fledged consultancy services to the local society; formation of Research Committee and Extension Activity Cell; and need for computerisation of college libraries. The study found recommendations for overall improvement in academic infrastructure, availability of practical manuals to students,

laboratory modernisation, formation of library advisory committee, internet facilities in library, new useful books for students, strengthen Computer Center, construction of women's hostels, provide economic support to students, timely holding of exams and declaring results by Universities, effective and efficient functioning of various committees, computerised administration and finance work, some kind of autonomy to colleges, constitution of IQAC, and filling up the vacant posts in colleges.

Pillai and Katre (2007) conducted an analysis of Accreditation Reports of NAAC accredited HEIs of Andhra Pradesh (AP) state. The report was prepared with the purpose of helping the State and its HEIs for quality enhancement. The researchers conducted an analysis and interpretation of the PTRs and scores. The study indicated 12 NAAC accredited universities out of 24 and 121 accredited colleges out of 1522 from six traditional universities in AP state on 21st May 2006. About six universities and five colleges were accredited under the star-grading system, and the six universities and 116 colleges were accredited under the nine-point scale system of grading. The accredited colleges included five Education Colleges out of a total of 70 Education Colleges.

The study found an average overall score of 80.29 of all the 12 universities, where the Sri Sathya Sai Institute of Higher Learning (SSSIHL) has the highest score of 96.00. The overall average score of Traditional Affiliating Universities was 76.93, where the Andhra University, Vishakhapatnam, has the highest score of 86.05. The study indicated 113 colleges out of 116 accredited colleges scored between 70-75 to 85-90 and B to A-grade, which showed appreciable overall grading and quality of colleges. The maximum number of A-graded ten colleges were from private/autonomous institutions, and five were women's autonomous institutions. Even the Private/autonomous colleges had a maximum number in 4-star grading, i.e., two colleges in the star-grading system. The analysis of the average overall scores of all traditional universities was in the range of 78.13-79.65, where the Sri Venkateswara University, Tirupati, had the highest average of overall scores of 79.65. The criterion-wise average scores of all colleges of the State were in the range of 67.43- 79.88, where the criterion Teaching-learning and Evaluation had the highest score and the Research, Consultancy and Extension criterion had the lowest score. The number of 'A' graded Education colleges was two.

The analysis of the criterion-wise recommendations and suggestions given in the PTRs of all colleges revealed no particular pattern of criterion-wise recommendations related to the grades. It suggested a lot of variations in the PTRs. The study suggested NAAC

for making necessary modifications in the format of the PTR so that it could get reflected in the number of kinds of recommendations and suggestions indicated for each institution.

The criterion-wise major recommendations were the introduction of restructured/employment-oriented courses, quality education at a low cost, additional-curricular inputs at the institutional level, student feedback and self-appraisal for improving teaching-learning and quality check, bridge and remedial programmes, linkages with industries and other agencies, enthusiastic, dedicated and student-friendly teachers, good research work by teachers, the consultancy offered by some departments, infrastructural facilities developed by government etc. The peer team found active participation of alumni and parents in the development of the college, good performance in sports and games, encouragement to cultural talent in students, internal planning and quality checks by well-functioning committees, effective functioning of College Planning and Development Council (CPDC) in government colleges, adoption of latest managerial concepts and strategies etc. The major Healthy Practices were imparting value-based education, inculcation of ethical values, encouraging students to realise civic responsibilities through participation in rallies, surveys, and effective team spirit among staff and students.

The peer team recommended for starting more locally relevant Certificate/ Diploma/ Add On (UGC) courses; recruitment of regular faculty; wider usage of modern teaching aids like Liquid Crystal Display (LCD)/ multimedia system; feedback from academic peers/ employers; update in the knowledge of teachers attending more national/ international seminars, strengthening of student appraisal of teachers and remedial programmes; improvement in research and research publication and expansion of consultancy, strengthening Research Committee etc. The Peer Team suggested for construction of an auditorium, extension of Computer and internet facilities to all students, computerisation of all library activities, purchasing more books and journals in the library, providing/ strengthening hostel facilities, strengthening alumni association for more participation, improving Career Guidance Cell, starting/ strengthening Placement Cell, proper maintenance of Health Centre, additional coaching for competitive examinations, computer training to all teaching and non-teaching staff, and computerisation of office.

Rama and Sisodia (2008) conducted an Analysis of Peer Team Reports of Accredited Institutions of Rajasthan state in terms of Issues and Strategies for Quality

Enhancement. The study's objectives were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils, and NAAC; and provide feedback to the stakeholders. In February 2008, the NAAC accredited four traditional and four Deemed universities and 100 affiliated colleges in Rajasthan, which included 04 Teacher Education colleges. The analysis was undertaken on grade sheets and PTRs using both quantitative and qualitative techniques.

The study revealed that the highest overall A+ grade was secured by an unaided Women's college at Jaipur. About 06 institutions were placed in 'A' grade, 13 colleges scored B++, while the highest number of 25 percent colleges graded 'B'. The C-graded colleges were 8, which were only government colleges located in small towns.

The comparison of the criterion-wise and overall performance of government and private colleges indicated that both types of colleges performed equally well concerning Curricular Aspect; Research, Consultancy and Extension; Organisation and Management; and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. Even the Overall Performance of Private Colleges was found significantly better than Government Colleges. The Girls' colleges and Co-education colleges were found performing equally well for all criteria, and even the overall quality did not differ significantly.

The analysis of PTR concluded that all the colleges were found catering to local higher education needs, following syllabi prescribed by the affiliating universities and annual system of examination except semester pattern in MCA and BCA. The admissions were as per university rules, lecture as the popular mode of teaching, unsatisfactory overall attendance of the students, particularly in co-education colleges and several posts vacant in many colleges. Majority of the teachers had a research background. A fairly good number of teachers undertook minor research projects, where some took major research projects either from the UGC or from other funding agencies. Most of the colleges had a fairly good number of classrooms, laboratories, a central library, a computer center/ room, well-maintained college buildings, sizable stock of books in the library, and a book-bank facility for the disadvantaged students. Most colleges did not have facilities like hostel, guest house, canteen, recreation club, seminar hall etc. The peer team indicated a higher drop-out rate in women and semi-urban colleges, enthusiastically pursued extracurricular activities, regular sports and cultural competitions, and minimal health care facilities in most colleges. Academic counselling

existed, but seldom career and employment guidance. The colleges had constituted various committees to get assistance in administration, arranged mechanisms for an internal and external audit, and some private colleges had a Grievance Redressal Committee. The healthy practices were extension and co-curricular activities mostly organised by NSS and NCC units; Vidhyalaya Vikas Samities formed in some government colleges in view of the success stories; computer Science and environment studies as compulsory subjects; and promotion of an ambiance of creativity and innovation by few colleges.

The peer teams recommended the need for planned periodic review of curriculum, autonomy to selected colleges, more student-centered and interactive teaching-learning processes using modern teaching aids. The PTRs suggested the introduction of entrepreneurship and employability, encouraging short-term courses, academic support to weaker students, tutorial system, formal student feedback mechanisms, semester system and autonomy for more effective governance. They recommended that Research Committees might be set up and more efforts to be made to get minor and major research projects; initiation of consultancy, industry-academia linkage, the establishment of Parent-Teachers Associations, Alumni Associations and functional career guidance/ placement cell and counselling services; campus interviews and linkages with local industries also required. The institutions needed autonomy for more effective governance and an immediate need to fill up vacant posts and new posts to be sanctioned.

Panigrahi (2010) conducted a survey on an evaluation of the quality of Self-financing Pre-Service Teacher Training Institutions in Haryana. The objectives of the study were to study the status of self-financing B.Ed. colleges about its infrastructural facility and to study the perception of teacher educators and pupil teachers towards the quality of self-financing B.Ed. colleges. Five self-financing TEIs were selected randomly from Haryana. The sample included 25 Teacher Educators and 150 students of those TEIs. The 150 students were stratified as 70 male and 80 female students and 70 rural and 80 urban students. The researcher developed separate questionnaires for Teachers' and students' perceptions towards self-financing institutes of Haryana. The questionnaires were in form of scale, which had three alternative responses, i.e., Agree (A), Disagree (DA), and Undecided (UD). A questionnaire cum observation schedule was also developed and used for those institutions' Basic–infrastructural facilities.

The study found that most teacher educators received a salary as per UGC norms because qualifications were as per the NCTE and UGC norms. Most Institutes had well-qualified teachers according to norms, but they were not well experienced. The qualified and experienced teachers were not interested in joining self-financing institutes due to less salary and job satisfaction. Nearly half of the Teacher Educators perceived that the self-financing institutions were purely concerned about profit-making. Maximum of the pupil teachers perceived that the Institutions did not have good infrastructural facilities, did not take care about punctual attendance in the institutions and rules, were inclined towards the financial benefits.

The study of institutional observation and academic achievement of pupil-teacher revealed that Majority of the self-financing Teacher-Training Institutes had good basic infrastructural facilities; good status of out-doors and in-doors environmental facilities; and good arrangements of classes even having limited space. The academic achievement of their students was found very low.

Gupta (2011) conducted a survey on the evaluation of NCTE programmes for teacher education in terms of its objectives, expectations and functions based on the perception of teacher educators. The objectives of the study were to appraise the aims and functions of the NCTE and to compare the appraisal of NCTE between principals and teachers, male-female teachers, teachers and principals of government-aided and self-financing institutions. The study was delimited to Chaudhary Charan Singh University (CCS), Meerut. Out of all principals and teacher educators of the TEIs affiliated to CCS University, 46 principals and 204 teacher educators were selected as sample using cluster random sampling technique, which consisted of 131 female and 119 male, while 52 Government aided and 198 self-financed institutions. The researcher had constructed a Questionnaire and an Attitude Scale. Mean, Standard Deviations and t-value were calculated for data analysis. The comparative appraisal of NCTE by various categories was found on nine dimensions, i.e., norms established by NCTE, research field, co-curricular activities, financial problems, libraries and laboratories, improvement of quality in teacher education, objectives, functions and expectations from NCTE, self-financed institutions, and basic infrastructure facilities in teacher education.

The study found all Principals and all teachers had nearly the same reactions towards the nine dimensions. The role of the NCTE to establish a proper teacher education system in self-financed Institutions was not appreciated by the principals and female

teachers, and they had an adverse approach towards it as compared to all teachers and male teachers, respectively. Female and male teacher educators had nearly the same reaction towards relating to research, establishing proper libraries and laboratories, and improving quality in teacher education and objectives, functions, and expectations from NCTE. In comparison to male teacher educators, the female teacher educators had more positive reactions towards the NCTE norms, more appreciation and importance for co-curricular activities in the education system and more satisfaction with the role of NCTE for regulating the financial rewards to be made to teacher educators. The male teacher educators were found more satisfied than female teacher educators with the role and performance of NCTE for providing reasonably good infrastructure facilities in TEIs. Teacher educators of government-aided institutions and self-financed Institutions had nearly the same reactions towards the role of NCTE relating to co-curricular activities, improvement of quality of teacher education, establishment of a proper teacher education system in self-financed institutions and for providing reasonably good infrastructure facility in TEIs. In comparison to teacher educators of self-financed institutions, the teacher educators of government-aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to teacher educators; more positive attitude towards the NCTE norms; more recognised the importance of libraries and laboratories; and more adverse view regarding the role of NCTE to accomplish its objectives, to perform effectively and to satisfy the desired expectations from it.

The study found the functioning of TEIs ineffective and did not produce powerful teachers. The study emphasised the need to modify the norms for teacher education and ensure its implementation by NCTE. The study's findings showed the same reactions of the principals and teachers, female and male teacher educators, teacher educators of government-aided and self-financed institutions towards the role of NCTE regarding the improvement of quality of teacher education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) conducted a study on the NAAC assessment and accreditation in Gujarat and prepared an analysis report. The objectives of the study were to help improve institutional performance, provide inputs to the policymakers, funding and regulatory councils and NAAC, and give feedback to the stakeholders. The sample for the study were nine universities and 397 HEIs of Gujarat accredited by NAAC on 15th September 2012 using a nine-point scale and CGPA system. It included two universities and 110 colleges accredited by a nine-point

scale, while seven universities and 287 colleges by CGPA system. There were 330 Government and grant-in-aid colleges, and 67 Self-financed colleges, 178 rural and 219 Urban Colleges, and 351 Co-education and 46 Women colleges. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions using both quantitative and qualitative techniques.

The study found less variation between the seven universities in Curricular Aspects with Governance and Leadership; Teaching-Learning and Evaluation; and Research, Consultancy and Extension criteria. Large variation was found between the seven universities in Innovative Practices, Infrastructure and Learning Resources, and Student Support and Progression criteria. The colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources.

Levene's test for equality of variance and t-test were used to find out the criterion-wise and overall performance of the colleges under the CGPA system. As a result, the study found no significant difference between the mean scores in the overall performance of the accredited Government-Grant-in-Aid colleges and Self-financed colleges. However, the mean scores of Government-Grant-in-Aid colleges were higher than the Self-financed colleges for Research, Consultancy and Extension, while mean scores of Self-financed colleges were higher than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources. The mean scores of the overall performance and the Infrastructure and Learning Resources criterion of Urban colleges were marginally higher than the rural colleges. The mean scores of Co-education colleges in these criteria were found higher than the Women colleges for the Curricular Aspects and Innovative Practices.

Factorial Design was used to examine the influence of the interaction of variables in all seven criteria in terms of type and region of colleges under the CGPA system. No significant influence of interaction was found between the type and region of colleges on all criteria and Overall Performance. The performance on Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas was marginally better than the Government-Grant-in-Aid colleges in urban areas and Self-financed colleges in rural areas. The combined effect of the Self-financed colleges and Urban areas has a marginally better impact than the Government-Grant-in-Aid colleges and Urban areas on Infrastructure and Learning Resources. The Government-Grant-in-Aid colleges and Urban area's combined effect had a marginally

better impact than the Self-financed colleges and Urban area on Research, Consultancy and Extension and Innovative Practices. The Self-financed colleges and Urban areas scored marginally better than the Government-Grant-in-Aid colleges and rural areas in Teaching, Learning and Evaluation; and Student Support and Progression; Governance and Leadership; and Overall performance.

The analysis of PTRs revealed that the admission process was systematic and transparent in all universities and as per rules, which needed to be more digitalised and performance-based. The study found semester and annual system of examination; revision of curricula by the affiliating universities once in five years followed by colleges; and no formal mechanism for receiving feedback about curricula from teachers or students. Majority of the colleges were found teaching by lecture method and providing guidance and counselling. Some of the colleges organised study tours, expert lectures, group discussions, computer-based learning, film screening and role play. Shortage of teachers was found both at college and university departments. Some of the colleges had effective use of library and laboratory. Some colleges had formal research committees. Most of the colleges conducted extension and outreach programmes under National Cadet Corps (NCC) and National Social Services (NSS) and other extension activities and provided sufficient infrastructural facilities. Very few colleges had sufficient audio-visual resources, library facilities, hostel, canteen, seminar hall and provision of the annual budget. Few colleges had computer and internet facilities and student aid funds. Some of the colleges formed Alumni Associations, students' councils and involvement in several committees and students' participation in extension and cultural activities at the state and national level. Majority of the colleges had information access and counselling to students, but career counselling was not found. Most of the colleges formed committees for internal management like admission, examination, college development, and disciplinary; and were given additional duties to teachers in those committees.

The Best Practices were a periodical arrangement of expert lectures in most colleges. Some colleges offered interdisciplinary courses, implemented an academic diary system, and displayed student answer sheets. Under the Innovative and Best Practices, the study found that some colleges had developed mechanisms for quality assurance by IQAC, some had designed their theme-based innovative programmes, and some had ISO certification.

Darji (2015) conducted a survey type study on Innovative Practices in TEIs of Gujarat State. The objectives of the study were to study the status and in-depth study of the Innovative Practices and factors facilitating and impeding the implementation of innovations. Stratified Proportionate Random Sampling was utilised and selected sample of 191 Secondary TEIs out of 301 from Gujarat state. All Principals/Heads of the Departments, Teacher Educators had experiences of a minimum of three years, and 15 percent Student-Teachers were selected as sample from the sampled TEIs. Questionnaires were constructed for Teacher Educators-Principals and Student-Teachers. The researcher used a checklist, semi-structured interview, observation schedule and did document analysis for data collection. Content analysis and frequency and percentage were computed for data analysis.

The study found that the TEIs of Gujarat state implemented different Innovative Learning Practices like Constructivist approach, Participatory learning approach, Dialog Mode of Seminar Instruction, Educational Forum, Grouping in different subjects, Open Book Exam, Dream school work, Balloon debate, Code of Conduct sessions and Teacher Aptitude Test (TAT)/ Teacher Eligibility Test (TET) sessions. The TEIs carried out various innovative activities like community work, *Gramjeevan Padyatra*, Career Centered activity, Creative hands activity, group activities, spoken English, personality development and Value Week celebration. ICT enhancement practices were found like Open Educational Resources practice, smartboard use, and online examinations. Lesson planning was based on life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, observation of demonstration lesson, preparation of digital lesson plans, multiple intelligence-based lesson plans, activity & value-based lesson plan, construction of a concept map during lesson planning and scripting the lesson in dialogue form. The Innovative practices applied in practice teaching were Simulated Stage Teaching Practice, school visit method, teaching in a variety of schools, teaching in an international school, evaluating the answer sheets in schools, long-distance off-campus internship programme, writing Reflective Diary, Home Room Practice, practices of life skills during practice teaching, use of Rubrics in checking the progress of student-teachers teaching practice and outside textbook lesson for annual test lessons.

The study revealed facilitating and impeding factors for the implementation of Innovations. Consultative and authority-based characteristics were found in decision-making in Majority of innovative practices. Governing bodies took an interest in the

decision-making on innovations in terms of institutions' objectives, policies and financial concerns. The teaching staff was frequently consulted and involved in the decisions relating to adopting Innovative Practices, which depended on the longer continuation of the staff in institutions. Decisions for the adoption of innovative practices took consultatively and participative discussion with the staff. Frequent regularity and the quality of interactions and communication of staff at the department and university level contributed to the success of innovations. The Academic Council, Boards of Studies and Boards of Examiners provided a background for decision making and implementation of innovative practices.

The study concluded that innovative practices were found more in English medium TEIs, self-financed TEIs and University Education Departments in Gujarat. The Gujarati and English medium public and private TEIs should improve innovative practices through proper planning and implementation of different innovative practices.

2.1.4 Studies related to Accreditation Impact

The review of related studies under the research area Perspective to Accreditation included seven research studies.

Paccioni, Sicotte and Champagne(2008) conducted a study on accreditation as a cultural control strategy. The objectives of the study were to understand the dynamics of that professional regulation model and its impact in terms of improved quality in services to users provided by the Quebec primary-care health organisations. The study was a multiple-case longitudinal study. The researchers developed an analytical model to measure the effects of the accreditation process exercised on the type of organisational control and implemented the quality management practices. Two Quebec primary-care health organisations were selected for the study. One was Institution-A, which was seeking accreditation for the first time, and the second was Institution-B, which was renewing its accreditation. The researcher undertook group interviews, semi-directed interviews of key informers, non-participant observations, a review of the literature, and structured questionnaires for all the employees working in both institutions.

The study found that Institution-A merged socialization in the teams during the accreditation process, which fostered professional cultural development. The accreditation renewal process at Institution-B created more bureaucratic instrumentation of the process by its accreditation committee. Professional cultural control associated with flexible and facilitator leadership was found in Institution-A,

and bureaucratic control associated controlling leadership style was found in Institution B. The Administrators perceived a positive effect on all the values in their leadership, but it was less apparent to the employees. Improving client satisfaction assessments was identified as a prime objective, but in terms of the values promoted in organisations, the accreditation has little effect on the perceptions of employees not directly involved in the process. Institution-A had planned to develop a policy framework for assessing client satisfaction about quality by striking a client satisfaction assessment committee and adopting assessment tools for different client groups. Institution-B had committed to assessing client satisfaction through the complaint handling process. The assessment of client satisfaction was more likely to reinforce bureaucratic control.

Roy (2011) studied the quality assurance perspective to academic growth in accredited colleges under Assam University. The objective of the study was to analyse the impact of the AA system implemented by the NAAC on the quality enhancement in teaching and learning of the HEIs affiliated with Assam University. The sample was 15 colleges assessed and accredited by NAAC in the year 2004. The data about the accreditation of HEIs were collected from the publications of the Assam University and affiliated colleges. A comparative assessment was carried out between pre and post of the year 2004 about the NAAC period.

The study found increased enrollment and very high annual growth of degree out-turn production of UG courses in the post NAAC period than pre-period. In the post-period, the colleges introduced new courses and career-oriented programmes. The affiliating university has extended full cooperation in the diversification of academic programmes, where the college development councils were also found coordinating between university and college. Few faculty members had been involved in NAAC related activities of writing SSR and Annual Quality Assurance Report (AQAR). Due to the completion of five years of accreditation, all colleges except one were found active in writing re-accreditation report and undertaking infrastructural development.

Chowdhury (2012) studied the impact of NAAC's AA on some of the accredited colleges under Gauhati University. Objectives of the study were to study the impact of NAAC's accreditation on the academic and qualitative development of the colleges in terms of total academic scenario, teachers and students; and to study the views of the teachers and students of some of the colleges under Gauhati University towards the teaching methods and library facility of their colleges before and after NAAC

accreditation, and their attitude towards assessment by NAAC. It was a descriptive survey, and data were collected based on current status phenomena. The researcher used random sampling and selected 15 urban and 15 rural area colleges accredited by NAAC till March 2007 out of all 108 provincialised colleges under Gauhati University from 10 selected districts out of 27 districts of Assam. The sample of 250 teachers and 450 students randomly selected from both urban and rural areas sampled colleges. The researcher had constructed two Questionnaires and an Attitude Scale for studying the attitude of the teachers and students.

The study found that majority of the teachers and students were satisfied with the present atmosphere of the college after assessment by NAAC. Majority of them stated that the NAAC assessment was useful for environmental upgradation, beneficial for the students and essential for qualitative improvement in their colleges. Most of the teachers and students replied that there were provisions for tutorial classes and computer training in their college, while Majority of the teachers responded that the tutorial classes were not special or extra classes for the slow learner group. Half of the teachers replied that new innovative teaching methods such as field study, extension education, project works and demonstration classes besides the usual lecture method were adopted after NAAC's assessment. Majority of the students from both the urban and rural colleges replied that the teachers did not use modern electronic gadgets during regular classes. Even most of the teachers also responded that they did not use modern teaching aids in the classroom instruction. Due to NAAC's advice, Majority of the colleges tried to take up steps to use gadgets like overhead projectors, slides, computers, internet, audio-video, Compact Disc (CD) and cassettes etc. during teaching in the classroom. However, the modern teaching gadgets were not used in many colleges because of lack of funds, orthodox attitude and apathy from the college authority and teachers, lack of proper supply of electricity, and lack of proper training for the use of gadgets.

Majority of the teachers and students replied positively that after NAAC's assessment, the libraries were improved in terms of construction, number of books and other facilities. The existing hostels were renovated, while new hostels for boys and girls were constructed with facilities of gym, playgrounds, gardens and library. After NAAC's assessment, major changes took place in the methods and techniques of teaching, regular classes, tutorial classes, use of modern electronic gadgets, educational programmes, regular seminars, workshops and conferences. Apart from it, the colleges

constructed auditoriums, separate common rooms for teachers and boys and girls. Moreover, every college had started a career and guidance cell, women's forum, grievance redressal cell, IQAC; increased educational exchanges programme; and encouraged teachers to organise and participate in seminars and workshops.

Shim (2012) studied the perceived value placed on the national accreditation of teacher and educator training programmes in American colleges. The purpose of the study was to examine the value placed on national accredited and non-accredited public and private colleges' outcomes of teacher and educator training programmes. It was a descriptive survey type study. The researcher had stated that six regional accreditation agencies served respective states. Each accreditation agency had its criteria for colleges to meet quality standards and objectives. Four year nationally accredited and non-accredited public and private colleges from all those six accreditation agencies were included in the population and sample for the study. The sampled accredited colleges were 160, which included 86 public and 74 private colleges. The sampled non-accredited colleges were 15, which involved 13 public and two private colleges. The number of Dean, full-time Faculty, part-time Faculty and Administrative Staff as respondents were 16, 109, seven and 28 from accredited colleges and 4, 7, 0 and four from non-accredited colleges, respectively. The US News and World Best Colleges Rankings (USNWBCR) included 13 ranked colleges out of 70, and Integrated Post-secondary Education Data System (IPEDS) covered 70 nationally accredited colleges and the seven non-nationally accredited colleges. Descriptive data from The USNWBCR and IPEDS were utilised in the study. The researcher has used Qualtrics as an online survey tool of the questionnaire provided by the University of Southern California (USC) and sent an e-mail to respondents. An Independent t-test was employed for all survey questions in determining significant differences between nationally accredited and non-accredited public and private colleges.

The study found no significant difference between the USNWBCR ranked nationally accredited public and private colleges about status and prestige. The national accreditation was found to foster accountability and competitiveness and enhance a college's status and prestige. The study revealed that the nationally accredited colleges produced higher qualified teachers and educators compared to non-accredited public and private colleges. No significant difference was found between accredited public and private colleges in relation to the Cost-Benefit Analysis (CBA) scores. Negative mean scores were found for both colleges, which indicated that national accreditation

was more costly than beneficial. The faculty and administrative staff believed that the monetary cost, time commitment and the fear of negative sanctions hindered their participation in the accreditation process. The benefits received from faculty working with other faculty were found moderate. From IPEDS, the study found no significant difference between the accredited public and private colleges about the outcomes of the teachers' and educators' training programmes. Significant differences were found in nationally non-accredited public and private colleges' outcome measures of teacher and educator training programmes as measured by graduation rates and financial aid.

Ganal (2014) conducted a survey on the Level of Quality Assurance of the TEP of State Universities of Region-II as a basis for a Monitoring Scheme for Philippine Normal University (PNU), Alicia, Isabela Campus, Isabela, Philippines. The main objective of the study was to determine the level of quality assurance of the TEP of state universities of Region II. The study was conducted in the school year 2004-2005. The population of the study was eight middle-level administrators such as the Deans, Directors and Academic Chairs; 55 Faculties and 14 alumni of the college of education from three Universities of Isabela State. The whole population was selected as sample for the study. The researcher used three sets of questionnaires as tools for data collection, i.e., A questionnaire for 'Socio-demographic Profile' of the respondents, a questionnaire used by the Accrediting Agency of Chartered Colleges and Universities of the Philippines (AACCUP) to survey the level of quality assurance of the TEP and a questionnaire to gather comments and suggestions from the respondents.

The findings revealed that the level of quality assurance and efficiency of the TEP was very good. The study found a flexible and warm atmosphere; the dominance of female administrators, faculty and alumni teachers; and scholarly publications in the institutions. The middle-level administrators provided challenges to faculties for better work to the desired achievement of programme and institution. The middle-level administrators and faculties were found with in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed for realising the same. The perceived weaknesses were physical facilities, learning resources and library, and research. The middle-level administrators and faculties and the alumni of the colleges of education were found qualified and prepared to serve in their respective functions and positions in the institution. The highest educational qualification was also found as a factor for the program's higher level of quality and excellence. The institutions strongly supported the provisions and conditions for

improvement of the TEP recommended by the evaluators. The developed and proposed plan of action and monitoring scheme also indicated the improvement of the TEP of PNU Isabela Campus, Alicia, Isabela.

Satao (2014) conducted a study on Information needs and information-seeking behaviour of lecturers in Arts, Commerce and Science Colleges with special reference to NAAC Accredited 'A' Grade Colleges in Maharashtra. Objectives of the study formed about lecturers of Arts, Commerce and Science colleges to identify their information needs, types of information sources, use of the internet by them, the purpose of information seeking, use of information technology, problems faced while seeking and using information, and to examine their information needs and information-seeking behaviour. The study was a survey type of study, and the sample was 77 colleges out of the population of 126 NAAC 'A' graded Arts, Commerce and Science colleges in Maharashtra accredited up to 30th June 2011. The sample of lecturers was 300 from those 77 sampled colleges. The data were quantified in terms of qualifications, age, gender, faculties, language known, frequency of internet use scores, mail communication scores, information seeking and types of services offered by the library.

The information needs of colleges lecturers were identified, i.e., use of the library for periodicals, journals, textbooks, reference books, book reviews as traditional media of information; and internet for searching the websites, e-mails, audio, video and Digital Versatile Disc (DVD). The information needs were preparing class notes, understanding their knowledge, observation and experiments, Ph. D. guidance and general awareness. All the respondents were found to depend on textbooks and reference books; Majority of them depended on discussion with a colleague. The other information sources were the library catalog, review of articles, abstracting journals, interdisciplinary discussion, referring back volumes, newspapers, exhibitions, annual reports, seminars, conferences, workshops, and pamphlets.

The purposes of Information seeking were studied, and it was found that all the respondents opined teaching purpose. Majority of them used internet facilities for general awareness, while books, journals and the internet for awareness about the latest development. More than half of the respondents opined for research, while few respondents opined extension of education, health, updated sports knowledge, entertainment, expert visits, and attend workshops. Few of the respondents agreed to share information with the other discipline for interdisciplinary application. Majority of

the lecturers used the internet for information purposes, and most of the respondents used the internet as a means of communication as per requirement. Google and Yahoo were the most preferred search engines in comparison with Lycos and AltaVista. More than half of the respondents stated that the information from e-sources was much more difficult. A significant positive correlation was observed between the information required and the use of information technology. Majority of the respondents reported English as the most common language of reading material, and very few preferred Marathi.

The study found problems college lecturers face when seeking and using information, where the expected information could not be accessed within the stipulated time. Majority of the lecturers faced the problem of scattered or outdated information material; most of the lecturers faced difficulty because of incomplete material, while few faced insufficient knowledge for the use of information.

The study found that younger and male lecturers often spent more time on e-mail and internet facilities than senior lecturers and females. The female lecturers were dependent on their spouses for information retrieval from the internet and were more cautious in seeking the required information. The information needs of Science faculty lecturers from the internet were relatively more than Arts and Commerce faculties. The nature, source, types and purpose of information were not influenced by the region or the faculties and used as per their requirement. The study revealed a significant positive relationship between information needs and information-seeking behaviour. It indicated that the higher the information needs, the higher the information-seeking behaviour.

Chakrabarti (2015) conducted a research study on the evaluation of Performance of Internal Quality Assurance Cells of selected NAAC Accredited General Degree Colleges affiliated to the University of Calcutta. The objective of the study was- to gather the perceptions of the IQAC coordinators of the selected NAAC-accredited general degree colleges affiliated to the University of Calcutta in terms of factors of IQAC viz. objectives, strategies, functions, benefits, composition, the role of coordinator, and operational features of IQAC. The study was an exploratory and perceptual study using the survey method. The study was delimited to the general degree colleges affiliated with the University of Calcutta, which completed at least the first cycle of AA till 31st March, 2014. About 93 colleges, 43 colleges were selected as sample using stratified random sampling from four districts. The researcher collected data using a questionnaire for IQAC coordinators and from relevant research-based

books/ articles, reports/ documents (particularly some publications of the NAAC) and some relevant websites. The data were analysed using Factor Analysis, Tests of Normality and Non-Parametric Tests.

The study explained the most important variable of each of the seven aspects based on factor analysis. The Objectives of IQAC aspect explained by the statement 'the prime task of IQAC necessarily for development of a system for conscious, consistent and catalytic improvement of the institution's overall performance'. The role of IQAC in designing strategies for faculty empowerment through training, retraining and motivation has explained the Strategies of IQAC aspect. The functions of IQAC were explained by two most important variables, i.e. (1) the IQAC helped in the creation of awareness about the need for improving quality of administrative functioning in their institution during the post-accreditation period, and (2) IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders.

The perceptions of the IQAC Coordinators about factors mentioned above of IQAC were attempted to draw meaningful inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution(s) and Tenure as IQAC Coordinator. The Tests of Normality and Non-Parametric Tests revealed that the scores of the factors did not follow a normal distribution concerning perceptions of the IQAC Coordinators. No significant variation was found in the respondents' perceptions for all the factors across both genders and all three Tenure of experience, i.e., below five years, between five to ten years and above ten years as IQAC Coordinator. Significant variation was found in the respondents' perceptions for the objectives and strategies factors across all three age groups between 31-40, between 41-50 years and between 51-60 years, where inter-age required further investigation. Significant variation was found in the factor strategies across all three lengths of service (5-15/16-25/26-35 years) in academic institutions. Not much difference was found among the mean scores with respect to the objectives, functions, composition and role of coordinator factors across the perception of IQAC Coordinator, who worked in all three Tenures.

2.2 SUMMARY OF THE RELATED STUDIES

The researcher reviewed research studies related to Quality and Accreditation and came across 33 research studies. From a review of those related studies, the researcher found a research study conducted in 1965 and a study in 1966, and other 31 studies were

conducted during the year 2002-2015. The number of foreign research studies was seven, including four studies from the United States of America. About 26 studies were conducted in different states of India. Two studies were conducted in each, i.e., Andhra Pradesh, Haryana, Maharashtra, North-East States of India, Punjab, Tamil Nadu, West Bengal and Assam studies were conducted in Gujarat. The studies in India included 12 studies conducted by NAAC in form of state-wise analysis reports based on NAAC Accreditation. The researcher came across 28 related research studies in higher education, four related to school and one related to Health organisations about accreditation. The studies related to higher education included seven studies in the field of Teacher Education. The researcher found 29 survey type studies and four Case studies.

Majority of the reviewed studies had drawn sample as Principals, faculties and students. The tools utilised by Majority of the studies for data collection were PTRs and NAAC Accreditation Grade sheets and questionnaires, while few had collected data by interview, opinionnaire, literature review, attitude scale, checklist, observation schedule, document analysis and website visit. The researchers analysed PTRs and NAAC Accreditation Grade sheets of individual institutions in terms of overall scores, criterion-wise scores, commendations and recommendations with Content analysis, frequency and percentage calculation using statistical calculations. In a few types of research, the researchers used measures of central tendency, t-test, ANOVA, Factor Analysis, Tests of Normality and Non-Parametric Tests for data analysis.

All the reviewed researches were categorised by the researcher in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

- The Accreditation Process included the study of methodology and criteria for AA, measurement of the effects of the Accreditation process for school and higher education, and evaluation of the Accreditation process.
- The Perspective to Accreditation covered perspectives and attitudes of administrators, Principals, teacher educators, student-teachers, teachers and students to quality and accreditation.
- The Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality revealed observations of practices carried out by the institutions and performance status of quality in terms of analysis of scores

achieved by the institutions. It included commendations and recommendations made by the assessors in PTRs. Other same types of researches were also conducted as individual research studies.

- After accreditation, its impact studied in terms of higher graded institutions, measurement of the effect of the accreditation process, level of quality assurance, quality assurance perspective, perceived values, academic and qualitative development of colleges, functioning of IQAC from the perspectives of IQAC Coordinators, monitoring Scheme for Quality Assurance and overall impact.

The entire review of related research studies under each research area is summarised below.

2.2.1 Summary of the studies related to Accreditation Process

The researcher reviewed five related research studies and summarised them under the research area ‘Accreditation Process’.

Snyder (2015) indicated that accreditation is a process for assuring quality, leading to shared best practices and benchmarks with peer institutions. The assessment of student learning was pointed out as an integral part of the accreditation process. For better accreditation, **Gagare (2014)** aroused the need for institutions to do proper prior study by the Institutions about the process, methodology and criteria of AA and grading system by NAAC. Moreover, it emphasised strengthening areas of research, alumni association, and quality of teaching, new course, extension services, timesharing, good location, good infrastructure, strong alumni, highly qualified-dedicated staff, separate work station for office staff, management support, conductive-healthy atmosphere, computer center, excellent books etc.

Pillai and Srinivas (2006) revealed readiness of NAAC for queries, and the NAAC peer teams were also found centered on enhancing the quality of education. On the other side **Trivedi (1965)** found mechanical, hurried, surfaced, autocratic, subjective Inspection by school inspectors and indicated more administrative than as an educational leader, guide and advisor to school. **Pillai and Srinivas (2006)** revealed the assessment work hastily, where one day visit for three streams college. The peer team functioned like inspectors, aggressive, fault finding and dominating behaviour, where anyone from the team became active. Due to Peer Team visits, institutions understand the value of involvement and cooperation of Parents and Alumni and realise their importance in the growth and development of the institution. **Pillai and Srinivas**

(2006) indicated that the two days per team visit was too short for a comprehensive assessment of various activities undertaken by the colleges. On the other side, the preparation of self-study reports indicated the deficiencies and areas for attention in the college. **Trivedi (1965)** revealed the inadequacy of selection and training of inspecting officers and inspection form/ report. Even **Pillai and Srinivas (2006)** indicated the requirement for improvement in the NAAC's methodologies and assessment instruments and the requirement for continuous introspection and proper training to Peer Teams to minimize inter-team variance.

Kaur and Sharma (2012) recommended separate criteria of AA exclusively for Colleges of Education. This recommendation was inappropriate because, before this study, the NAAC had already implemented separate criteria and methodology for TEIs from 1st April 2007. So, this recommendation is automatically rejected and puts a question mark on the reliability of this study.

Trivedi (1965) suggested objectivity in reports and follow-up work. **Trivedi (1965) and Kaur and Sharma (2012)** recommended a periodical surprise visit by NAAC after Accreditation.

2.2.2 Summary of the studies related to Perspective to Accreditation

The researcher summarised five reviewed related studies under the research area 'Perspective to Accreditation'.

Sosa Lliteras (2002) indicated positive and strong agreement between the attitudes of principals and teachers to the accreditation process and expressed benefits of accreditation in the fundamental areas of the educational process. **Anzoise (2006)** indicated five internal success factors made a large impact on the accreditation process, while the two external success factors did not impact. The accreditation was perceived as useful and important for quality improvement. Moreover, it indicated the success factors in the accreditation process, i.e., student participation, opportunity to develop institutional self-esteem; faculty self-esteem for obtaining accreditation status; and students did not want to lose the earned credits.

About the accreditation process, **Sosa Lliteras (2002)** found high cost, the extra workload for teachers and staff; too long and too time-consuming process and in some cases too expensive, sacrificed time of students learning and excessive paperwork. **Anzoise (2006)** revealed problems during the accreditation process like preparation of the Self-study, inadequate profile and performance of the peer committee members;

inadequate criteria for evaluation; and absence of adequate information about the quality indicators. **Sosa Lliteras (2002)** concluded about the expertise of the evaluation committee was needed to accomplish responsibilities in reviewing the school. Even **Anzoise (2006)** found resistance factors to the accreditation process, i.e., cultural resistance, organisational barriers, threats to power and influence, and students and senior administrators different perspectives. **Rajasingh (2009)** found very high perception gaps between the industries and faculty factors such as generic skills and academic preparedness pertaining to the quality of students and presentation skills and interpersonal skills relevant to the quality of faculty. A significantly high deviation was found between the faculty and alumni on factors such as academic preparedness, employment competence and social responsibility for the quality of students. A vast difference was found between the perceptions of both presentation skills, academic competence and interpersonal skills relevant to the quality of faculty. **Joicy (2011)** found very high accomplishment of the quality indices by teacher educators and student teachers in the entrance examination, admission, the number of working days, objectives of the course, curriculum transaction and time-table, competency and commitment of the teacher educators, project work and practicum, curricular and extracurricular activities, examinations and evaluation and outcome of the course, while very low in practice teaching and mentoring the student teachers. **Ulmer (2015)** revealed that the accreditation scores were found significantly higher in institutions with teachers who had a positive attitude towards the accreditation process than institutions with teachers with a negative attitude.

Anzoise (2006) found that the respondents perceived more emphasis on improving the Accreditation Process than current criteria. Recommendations were made for providing adequate training for developing homogeneous evaluation criteria; knowledge of the course and institution to be accredited; expertise of evaluation committee; and more focus on students' outcomes than the infrastructure. **Ulmer (2015)** recommended implementing practices for accreditation processes like providing continued resources to teachers from stakeholders, involvement of educational leaders, and professional development programmes for teachers. **Sosa Lliteras (2002)** recommended that the accreditation process be reviewed annually instead of three years.

2.2.3 Summary of the studies related to Analysis of Performance Analysis and Performance Scores of accredited institutions in terms of quality

Sixteen studies reviewed under the research area ‘Analysis of Performance Analysis and Performance Scores of institutions in terms of Quality’ are summarised.

The Analysis of NAAC Accreditation Reports indicated four types of grading systems given by NAAC until March 2015. The researcher found all 12 research studies in State-wise Analysis of NAAC Accreditation Reports, which included all four types of grading system, while the analysis was carried out excluding the first grading system. None of the studies covered analysis of the first accreditation method of percentile marking for Ten criteria and an overall average score in percentage; the second accreditation method of percentile marking for seven criteria and an overall average score in percentage with a grading system (A* to A*****) covered seven research studies. The third accreditation method was percentile marking for seven criteria and an overall average score in percentage with a nine-point grading system (C, C+, C++, B, B+, B++, A, A+, and A++) covered 14 research studies. Only one study covered the CGPA system of four-point grades (A, B, C and D).

The review of State-wise Analysis of NAAC Accreditation Reports was summarised analysis of scores and PTRs in terms of criterion-wise and overall scores and performance. **Katre and Pillai (2004); Pillai, Madhukar and Srinivas (2004); Katre, Pillai and Hegde (2005); Pillai and Katre (2007); and Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the average overall score of all the accredited institutions was high. **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** indicated that the private autonomous/private affiliated colleges scored higher overall average score than the government autonomous/affiliated colleges. **Rama and Sisodia (2008), Pillai and Rama (2004), and Pillai and Katre (2007)** found significantly better overall Performance of Private Colleges than Government Colleges. **Pradhan, Stella and Patil (2004); and Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher overall average scores of urban colleges than rural colleges. **Pillai, Madhukar and Srinivas (2004); and Rama and Sisodia (2008)** found the highest number of colleges accredited B grade, while **Pradhan, Stella and Patil (2004)** found lower than the B grade. **Katre and Pillai (2004)** indicated that the overall scores of institutions assessed under the nine-point grading system of AA appeared to be rather high than those of the earlier two systems. **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Self-financed colleges than the Government-Grant-in-Aid colleges for Infrastructure and Learning Resources and

lower for Research, Consultancy and Extension, while similar mean scores in overall performance.

The high scored criteria were Organisation and Management (**Katre and Pillai, 2004**); Teaching-learning and Evaluation (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil, 2004**); and Infrastructure and Learning Resources (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004**). The low scored criteria were Research, Consultancy and Extension (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; Pillai and Katre, 2007; and Pradhan, Stella and Patil 2004**); and Healthy Practices (**Sarkar, Aludiapillai, Varghese and Bajaj, 2004; and Pradhan, Stella and Patil, 2004**).

Regarding the types of colleges, **Rama and Sisodia (2008)** revealed the equal well performance of Private Colleges and Government Colleges concerning Curricular Aspect; Research, Consultancy and Extension, Organisation and Management, and Healthy Practices. The Private Colleges were found superior to Government Colleges on Teaching, Learning and Evaluation; Infrastructure and Learning Resources, and Student Support and Progression. **Pillai and Rama (2004)** indicated that the Private colleges were found significantly superior to Government Colleges on criteria Curricular Aspect; Teaching-Learning and Evaluation; Infrastructure and Learning Resources; Student Support and Progression; Organisation and Management; Healthy Practices and overall, while low status on the Research, Consultancy and Extension criterion by both of them. **Rama and Sisodia (2008)** found the same mean scores of Co-education colleges and Women colleges, which performed equally well for all criteria, while **Madhukar, Shanbhag, Patel, Ved and Mehta (2014)** found higher mean scores of Co-education colleges than the Women colleges for the Curricular Aspects and Innovative Practices.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) indicated better performance in Curricular Aspects of the Government-Grant-in-Aid colleges in rural areas and Self-financed colleges in urban areas. The Self-financed colleges and urban area colleges scored marginally better than Government-Grant-in-Aid colleges and rural areas for Teaching, Learning and Evaluation, Student Support and Progression; Governance and Leadership, and Overall performance, while lower for Research, Consultancy and Extension and Innovative Practices criteria.

Pillai and Rama (2004); Sarkar, Aludiapillai, Varghese and Bajaj (2004); and Pradhan, Stella and Patil (2004) found that the TEIs scored comparatively higher

than the General Education Colleges. Moreover, **Sarkar, Aludiapillai, Varghese and Bajaj (2004)** found uniformity among most TEIs in quality of education.

Madhukar, Shanbhag, Patel, Ved and Mehta (2014) revealed that the colleges accredited with the CGPA system were consistent in Student Support and Progression; Teaching-Learning and Evaluation; Governance and Leadership; and Infrastructure and Learning Resources criteria.

The review of 12 state-wise accreditation reports on PTRs analyses showed that the colleges followed university prescribed syllabus, lecture method for teaching, limited or lack of modern teaching technology, inadequacy or absence of innovative teaching methods and very few studies indicated availability of sufficient audio-visual resources. Some studies revealed extension and outreach programmes being conducted by institutions. Some studies indicated a shortage of teachers at college and university departments, particularly in self-financing colleges and some institutions with part-time/ad-hoc teachers. Some colleges had established Alumni Associations and formal Research committees, which had less or no contribution. Many colleges had formed committees for internal management with little administrative and financial autonomy, a lack of a proper link between the parent university and the affiliated colleges, and no formal mechanism receiving feedback about curricula from teachers or students. The analysis revealed need for financial assistance to needy students and remedial coaching in accredited colleges. Many colleges had found unstructured academic counselling and occasional career and employment guidance. Some research studies indicated a higher dropout rate from the institutions. A research study revealed that the criterion-wise recommendations and suggestions given in the PTRs indicated no particular pattern of criterion-wise recommendations related to the grades and lots of variations in the PTRs.

Desai (1966), Panigrahi (2010), Ganai (2014) and Gupta (2011) conducted quality assessment research studies. **Desai (1966)** revealed that Majority of school teachers lacked a fundamental understanding of their purposes for secondary education as to give character training and help emotional, physical and mental development. Improper planning for learning experiences, instructional activities and use of community resources, stereotyped and monotonous curriculum, satisfactory physical facilities of schools, proper maintenance of records by many schools, the internal assessment indicated by very few schools and no counselors in Majority of the schools. **Panigrahi (2010)** revealed qualified but less experienced teachers in institutions, while experienced teachers did not interest to join self-financing institutes due to less salary

and lack of job satisfaction. Nearly half of the Teacher Educators perceived self-financing institutes concerned with profit-making. Majority of the pupil teachers perceived bad infrastructural facilities, no care about punctual attendance and always inclined towards the financial benefits. The institutional observation revealed good basic infrastructural facilities and good classes arrangements, while the students' academic achievement was found very low. **Ganal (2014)** found a flexible and warm atmosphere; the dominance of females as administrators, faculty and alumni teachers; and scholarly publications. Even the administrators and faculties were found to have in-depth knowledge, understanding, and appreciation of the TEP's vision, mission, goals, and objectives and committed to their realisation. The higher level of quality and excellence of the programme was due to the highest educational qualification. **Gupta (2011)** found that the principals and female teachers did not appreciate the role of the NCTE to establish a proper teacher education system in self-financed Institutions. The female teacher educators had more positive reactions than male teacher educators towards the NCTE norms. The teacher educators of Government aided institutions were found more satisfied with the role of NCTE for regulating the financial rewards to the teacher educators than the teacher educators of self-financed institutions. The teacher educators of Government aided institutions had a positive attitude towards the NCTE norms; for libraries and laboratories, but more adverse views regarding the role of NCTE to accomplish its objectives, perform effectively and satisfy the desired expectations. The study found that the TEIs were not effective and did not produce powerful teachers. The study revealed a requirement for modification of NCTE norms for teacher education and its proper implementation.

Healthy Practices in 12 studies were the formation of subject societies and various clubs; decentralised administrative work; involvement of local people in the development of the college by '*Jan-Bhagidari Samiti*'; use of resources by outsiders; organisation of extension and co-curricular activities; community services; promotion of an ambiance of creativity and innovation; formation of Vidhyalaya Vikas Samities in view of the success stories; and constant monitoring of activities. Other healthy practices were collaborations of Chemistry and Geology departments with ONGC, Oil India, and Geological research labs. MoUs were signed with industries and research institutions; funds were collected in from other sources; and tied up with private providers for various professional programmes of training. Healthy practices in relation to students were students' feedback and continuous internal evaluation; guest lectures;

setting up of competitive exam centers; new and relevant career-oriented and short term courses; computer courses conducted by CDAC; imparting value-based education and inculcation of ethical values; training in disaster mitigations and rehabilitation; and encouragement in realising civic responsibilities through participation in rallies and surveys. Under the CGPA system, the Best Practices were interdisciplinary courses, academic diary system, display of model answer sheets for students, mechanisms for quality assurance by IQAC, theme-based innovative programmes etc.

Darji (2015) found innovative practices like the Constructivist Approach, Participatory Learning Approach, Balloon Debate, Code of Conduct sessions, and *Gramjeevan Padyatra*. The Innovative Practices for lesson planning were life skills, multiple intelligence, constructivist approach and digital lesson plans supported by Spark sessions, and Multiple Intelligence based lesson plans were found. Innovative practices in Practice teaching were Simulated Stage Teaching Practice; evaluation of the answer sheets in schools; Home Room Practice; practices of life skills during practice teaching; and use of Rubrics. The study revealed that the decisions for adopting innovative practices took consultatively and participative discussion with the staff. Even the Governing bodies, the Academic Council, Boards of Studies and Boards of Examiners also supported the decision-making and implementation of innovations. The study found that English medium TEIs, Self-financed TEIs and University Education Departments in Gujarat implemented more innovative practices, which required proper planning and implementation.

The recommendations from 12 NAAC accreditation analysis reports were more student-centered and interactive teaching-learning processes using modern teaching aids and ICT beyond the lecture method. The studies suggested introducing the semester system, periodic review of curriculum, revision of syllabi, strengthening of Computer Center. The library services were recommended to be upgraded and modernised with internet facilities and more books and journals. The recommendations in terms of students were economic support, tutorials, bridge and remedial coaching; Internship, campus interviews, encouragement to cultural talent etc. The studies suggested the need to fill vacant teaching positions in colleges, autonomy to colleges and linkage with practicing schools, inter-intra Universities, Industry, and other agencies. The reviewed studies concluded recommendations for introducing job-oriented, interdisciplinary, market needs, need-based professional, locally relevant Certificate/Diploma/Add On (UGC) courses, and entrepreneurship and employability

encouraging short-term courses. The studies emphasised setting up an IQAC, formation and strengthening the research committee, Research cell, Extension Activity Cell, Career Guidance, Placement Cells, Alumni association, Parent-teachers association, etc. The provision for external research funding to undertake research projects and a mechanism to provide consultancy services to the local society was suggested. The creation of mechanisms for formal student feedback and appraisal of faculty performance was also needed to be enhanced. **Pillai and Katre (2007)** recommended that NAAC make necessary modifications in the format of the PTR. So it could be reflected in the number and type of recommendations and suggestions indicated for each institution.

2.2.4 Summary of the studies related to Accreditation Impact

The review of seven related studies under the research area 'Perspective to Accreditation' is summarised below.

In post Accreditation period, **Roy (2011)** found the introduction of new courses and career-oriented programmes, increased and well-performed overall enrollment growth rate, cooperation in the diversification of academic programmes between university and college etc.

Under measuring the effect of the accreditation process, **Paccioni, Sicotte and Champagne (2008)** found professional, cultural control associated flexible and facilitator leadership by using client assessment tools in institutions seeking accreditation, while Bureaucratic control associated controlling style of leadership and clients' complaint handling process was found institutions' renewing accreditation.

Pillai and Srinivas (2006) revealed that more than half of the accredited colleges constituted an IQAC. As follow-up actions, many institutions had strengthened their infrastructure, constructed new buildings, computerised the library, modernised laboratory, teaching and learning became more participatory and interactive, constituted various committees, updated records and prepared planned programmes. The institutions benefitted from the peer team visit and accreditation became aware of the need for quality education, obtained a clear perspective to the path of functioning, and increased stakeholders' participation.

Chowdhury (2012) found Majority of the teachers and students expressed the assessment was satisfied with the present atmosphere of the college, useful for environmental upgradation, beneficial for the students and useful to bring qualitative improvement in their colleges. The colleges tried to take up steps to use modern

gadgets, provision for tutorial classes and computer training, improvement in libraries, and new hostels. After NAAC Accreditation, every college had started a career and guidance cell, women's forum, grievance redressal cell, and IQAC. Besides the usual lecture method, innovative teaching methods used after accreditation like field study, extension education, project works, and demonstration classes.

Shim (2012) found that the accreditation had fostered accountability and competitiveness and enhanced the status and prestige of the accredited college. The study of an accrediting agency indicated higher qualified teachers and educators produced by the nationally accredited colleges than the non-accredited public and private colleges. In contrast, another accrediting agency indicated no significant difference between the accredited public and private colleges about the same.

Ganal (2014) found a very good level of quality assurance and efficiency of the TEP, and the institutions strongly supported the provisions and conditions for improvement of the programme recommended by the evaluators. The institution developed and proposed a plan of action and monitoring scheme for the improvement of the TEP.

In NAAC Accredited 'A' Graded Colleges, **Satao (2014)** found that the information needs of lecturers were fulfilled by the use of the library and internet for teaching purposes. Majority of them used the internet for general awareness, books, journals and the latest development. The most preferred search engines for information needs were found Google and Yahoo. The problem faced in form of scattered or outdated information material by Majority of them. Younger male lecturers were found comfortable with the internet, while females were found dependent. The nature, source, types and purpose of information were not influenced by the region or the faculties and used the recommendations per their requirements. The study revealed higher the information needs, the higher the information-seeking behaviour.

During the post-accreditation period, **Chakrabarti (2015)** found that the IQAC helped create awareness about the need to improve the quality of administrative functioning in their institution. The IQAC needed to communicate quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders. The benefit of IQAC was educating the institution's staff for the adoption and dissemination of best practices in connection with governance. The perceptions of the IQAC Coordinators about the factors like objectives, strategies, functions, benefits, composition, the role of coordinator and operational features of IQAC were attempted to draw meaningful

inferences in terms of IQAC Coordinator's Age, Length of Service in Academic Institution/s and Tenure.

2.3 IMPLICATIONS FOR THE PRESENT STUDY

The researcher reviewed related studies and came across 33 research studies related to quality and accreditation. Majority of the reviewed studies were survey types, which had utilised PTRs, accreditation grade sheets, and questionnaires for data collection. Among all the reviewed studies, 12 studies were conducted in State-wise analysis accreditation reports by NAAC in India, where the researchers analysed PTRs and accreditation grade sheets. All the reviewed studies were categorised in four research areas, i.e. (1) Accreditation Process, (2) Perspective to Accreditation, (3) Analysis of Performance Analysis and Performance Scores of Institutions in terms of Quality and (4) Accreditation Impact.

The review of related studies indicated that the accreditation was considered important for quality improvement, which brought quality development in colleges and led to shared best practices and benchmarks with peer institutions (Anzoise, 2006; Joicy, 2011; Chowdhury, 2012; and Snyder, 2015). A proper study of the methodology of AA gave appropriate direction to the institution (Gagare, 2014). The accreditation required efforts from the institution for perspectives like quality, preparation, cooperation from stakeholders, positive attitude to the accreditation process, and solution of problems (Joicy, 2011; Rajasingh, 2009; Anzoise, 2006; and Ulmer, 2015). Even the NAAC was found ready to solve the queries of the accrediting institution (Pillai & Srinivas, 2006). In post Accreditation period, Majority of the teachers and students were found satisfied with the assessment; the accredited institutions enhanced status and prestige; and better functioning of IQAC and creation of awareness about the need for improving quality (Chowdhury, 2012; Shim, 2012; and Chakrabarti, 2015).

Peer Team had a shorter period for the AA process and completed the process hastily and dominated; needed improvement in the NAAC's methodology; and adequate training to peer team members (Pillai & Srinivas, 2006; and Anzoise 2006). The TA of Peer Team members were found usually borne by the colleges (Gagare, 2014). The accreditation and regulations of HEI were found in need of reformation (Lynne, 2014), but on the other side, the new methodology for AA was found superior to the previous (Gagare, 2014). The teacher's teaching was not tested (Gagare, 2014), but the practice-oriented teaching, use of gadgets for teaching, and varied ways of teaching were

emphasised by the Peer Team (Chowdhury, 2012). Thus, the review of the related studies shows contradictory and mixed findings, which lead the researcher to carry out scientific investigation about AA of TEIs by NAAC.

The researcher came across State-wise Analysis of NAAC Accreditation Reports conducted on AA of HEIs, where very few studies specifically focused on accreditation of TEIs as an aspect. Those studies exposed the analysis of criterion-wise and overall scores, commendations, recommendations and quality initiatives. Some studies focused on variables like gender, designation, experience, type of institution and area of the institution. The review of the related studies implies that the researchers studied stakeholders' perceptions in terms of the AA process. The performance of the Peer Team in terms of training or providing grades was studied from the perspective of Stakeholders, while researchers did not study the reflections or opinions of the Stakeholders and Peer Team.

In relation to research study, particularly on accreditation of TEIs, the researcher came across only two research studies on TEIs conducted by Kaur and Sharma (2012) in Panjab and Darji (2015) in Gujarat did not come across any other study on TEIs in India. The study conducted by Kaur and Sharma (2012) created vagueness in its recommendation for the requirement of separate criteria for TEIs in India. Darji (2015) studied only the Innovative Practices in TEIs of Gujarat and did not study the AA. The researcher found two studies in Gujarat, i.e., one was conducted on the inspection system of secondary schools (Desai, 1966), while the second was an analysis of NAAC accreditation of all HEIs of Gujarat state (Madhukar, Shanbhag, Patel, Ved and Mehta, 2014), and did not come across to any study on AA of TEI or TEP in Gujarat. It led the researcher to conduct a scientific investigation on the AA of TEIs in Gujarat.