

CHAPTER- III

METHODOLOGY

3.0 INTRODUCTION

The present chapter contains the Research Design of the study. This chapter presents the Methodology, which includes Population, Sample, Tools, Data Collection and Data Analysis Techniques employed for the present study.

3.1 TYPE OF THE STUDY

The present research was a survey study about NAAC Accredited TEIs affiliated with different Universities of Gujarat State.

3.2 POPULATION FOR THE STUDY

The NAAC assessed and accredited TEIs as per the Manual for Self-Appraisal of TEIs applied from 1st April 2007. NAAC allotted A, B, C and D grades with CGPA to the TEIs based on their performance analysis as observations in PTRs. The letter grades A, B and C are interpreted as 'Accredited', while 'D' is interpreted as 'Not Accredited'. The population for the study was Accredited TEIs. The new methodology's total number of accredited TEIs in Gujarat state from April 2007 to March 2015 was 57. All the 57 accredited TEIs constituted the population for the present study.

The AA process involved NAAC personnel, NAAC office bearers, Assessors and stakeholders of accredited TEIs. The NAAC office performed the main role, i.e., allotment of Assessors as Peer Team, fixing dates of Peer Team visit and communication about AA to Assessors and TEIs. NAAC carried out the AA process by allotting Assessors to Peer Team and then accredited TEIs. The NAAC personnel and NAAC office bearers were not directly included in the AA process of TEIs. Assessors of accredited TEIs were deputed by the NAAC, who was directly connected and performed a central role in the AA process. So, the Assessors as Peer Team members, i.e., Chairperson, Member Coordinator and Member- from all 57 TEIs were included in the population for the present study.

The stakeholders of TEIs involved Government, Funding and Monitoring agencies, affiliating universities, employers, Principals, Teaching Faculty, Supporting Staff, students, parents, alumni, practicing schools, the academic world and the community. Their performance of a role in the NAAC AA process of TEI was considered in respect of this research. The Government, funding and monitoring agencies, affiliated universities, the academic world, and the community were not involved in the AA process; on the other hand, the employers, parents, alumni, and practicing schools have

to perform very little. So, they were not included in the population of the present study. The Principals, IQAC coordinator, Teaching Faculty and Supporting Staff of the specific NAAC assessment year- were directly connected and involved in the AA process. So, Principals, IQAC coordinator, Teaching Faculty and Supporting Staff of the particular year of the NAAC Peer Team visit to assess their TEI from all 57 TEIs has also constituted the population for the present study.

Thus, the population for the present study constituted all 57 TEIs and their Assessors from 57 Peer Teams. The population of Assessors of TEIs constituted all Chairpersons, Member Coordinators and Members from 57 Peer Teams. The probable number of assessors was 171 (three multiplied by 57), but the total number of Assessors was 81 because of the repetition of the same Assessor in another TEI of Gujarat from April 2007 to March 2015. So, the population of Assessors was 81.

The population of all 57 TEIs constituted 57 Principals and 57 IQAC Coordinators from those accredited 57 TEIs. The population of the Teaching Faculty was six (excluding IQAC Coordinator) from each TEI, so it was 342, and the Supporting Staff was 57 from those accredited TEIs.

3.3 SAMPLE FOR THE STUDY

All 57 NAAC accredited TEIs of Gujarat were selected as sample to study the overall accreditation status; to compare the CGPA on Seven Criteria and Overall CGPA of different types of TEIs, and to study the relationship amongst Seven Criteria and Overall CGPA of TEIs. It included the document of the Quality Profile Grade sheet of all accredited 57 TEIs.

All the 57 NAAC accredited TEIs of Gujarat were selected as sample to study the performance of TEIs in form of observations provided by the Peer Team in PTR of respective TEI for every key aspect under each criterion. The observations in PTRs were for 36 key aspects under seven criteria, overall observations and recommendations.

Random sampling was utilised to study the opinions of Assessors and stakeholders about AA. The sample of Assessors has constituted eight Chairpersons, ten Member Coordinators and 11 Members of the Peer Team. The stakeholders from sampled TEIs have constituted 15 Principals, 11 IQAC Coordinators, 31 Teaching Faculty and ten Supporting Staff members.

3.4 TOOLS AND TECHNIQUES FOR DATA COLLECTION

Tools for data collection in the study were in relevance to the present design of the study, objectives, population and sample. Four Questionnaires, three Opinionnaires and a five-point Scale were constructed for data collection.

The present study was related to NAAC accreditation of TEIs in Gujarat with respect to accreditation status, comparisons between CGPA, relationships of CGPA, the study of PTRs and responses of Assessors and stakeholders involved in accreditation. The documents of Grade sheets were used to study accreditation status, comparison of CGPA and relationship amongst CGPA. The observations of Peer Teams were studied from PTRs. The study inquired to Assessors from NAAC and stakeholders from TEIs about aspects of input, process and output of accreditation of TEIs. The study further inquired about views and problems faced by stakeholders involved in the accreditation. The researcher had constructed the tools with taking due care. Main points related to accreditation were taken care of and included in the tools.

Review of related studies indicated data collection in majority studies with tools like PTR documents and NAAC Accreditation Grade sheet documents and Questionnaires. The present study utilised the following tools constructed by the researchers.

- Documents Analysis of PTRs and NAAC Accreditation Grade sheets
- Questionnaires for Assessors, Principals-IQAC Coordinators, Teaching Faculty and Supporting Staff
- Opinionnaires for Assessors, Principals-IQAC Coordinators and Teaching Faculty
- Scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty

3.4.1 Document Analysis

The documents of PTRs collected from the NAAC website or accredited TEIs. The respective Peer Team of TEI prepared the PTRs during their visit to the institution for institutional accreditation of TEI. The respective Peer Team of TEI studied the SAR of TEI about AA before the visit. Then the team observed and verified documents at the place of TEI during the Peer Team visit. At the end of visit, the Peer Team provided observations in form of performance analysis of TEI about 36 key aspects under seven criteria along with Overall Analysis and Recommendations in respective PTR. The observations were qualitative from the perspective of Peer Team, whereas for the researcher, those observations were taken as statements only. So, the documents of

PTRs of sampled TEIs were used to analyse the statements of observations of the Peer Team in the present study.

Every Peer Team provided PTR along with a Grade sheet. The Grade sheet contained weightage and CGPA with statistical calculations. It was followed by a recommendation of a Grade to NAAC to be allotted to the assessed TEI. So the document of Grade sheet indicated the individual accreditation status of TEI. Overall accreditation status, comparison of CGPA and relationship amongst CGPA of all accredited TEIs of Gujarat was drawn from the Grade sheets of all accredited TEIs.

Thus, document analysis of the PTRs and Grade sheets were utilised to study Peer Teams' observations and accreditation Status of TEIs.

3.4.2 Questionnaires for Assessors, Principals- IQAC Coordinators, Teaching Faculty and Supporting Staff

Questionnaires for the present study were constructed by following steps indicated by Mouly (1970) in his book entitled “The Science of Educational Research”. The researcher constructed four separate questionnaires for Assessors, Principals- IQAC Coordinators, Teaching Faculty and Supporting Staff in relation to their responses about AA of their TEI. The developmental process of all four questionnaires was discussed altogether hereunder.

Step- 1

The first step in the construction of an adequate questionnaire was to attain a thorough grasp of the field and a clear understanding of the study's objectives and the nature of the data needed. In the present study, the researcher went through the Manual for Self-Appraisal of TEIs applied from 1st April 2007, Manual for Peer Team and NAAC Newsletters. Review of related studies indicated about construction and utilisation of questionnaires. Concerning the accreditation process, Sosa Lliteras (2002), Anzoise (2006), Chowdhury (2012), Shim (2012), and Chakrabarti (2015) constructed and used questionnaires for data collection from Principals and teachers; senior academic administrators and faculty; teachers; Faculty and administrative staff; and IQAC coordinators respectively. The researcher conceptualised the questions for questionnaires for Assessors, Principals- IQAC Coordinators, Teaching Faculty and Supporting Staff based on documents of the first step.

Step- 2

The second step was to conduct unstructured interviews with the persons who were familiar with the field. The researcher personally met with Assessors, Principals, IQAC

Coordinators, Teaching Faculty and Supporting Staff and discussed Assessor's qualification, training for assessment of TEI, manual for AA, pre-work for Peer Team visit of particular TEI, appropriateness of key aspects of criteria and weightage, detail about the accreditation of particular TEI, visit TEI as a member of Peer Team, coordination from TEI/ stakeholders, document validation, requirements of facilities for AA, comparison between stakeholders' responses and SAR, time for assessment work, difficulties in assessment work, feedback about the result and AA process. In consideration of the questionnaires for Principals, IQAC Coordinator, Teaching Faculty and Supporting Staff the researcher discussed professional detail, manual and process of AA, amount of expense for AA, detail of intimation from NAAC office about Peer Team visit, preparation of TEI for AA, allotted responsibility, the familiarity of Assessor to TEI, schedule for Peer Team visit, the arrival of Assessors, facilities to Assessors, arrangement of meeting with Peer Team, response in reaction to SAR, manipulation of documents, cooperation amongst Assesses, problem/ difficulty to Peer Team, communication with Peer Team about PTR, offer to Assessor for future service, feedback about AA manual and process, and allotted CGPA and grade. The researcher conceptualised questions and noted discussion points for the construction of four questionnaires for Assessors, Principals- IQAC Coordinators, Teaching Faculty and Supporting Staff.

Step- 3

The third step was the precise length of the questionnaires. Instead of infinite length, a limit must be considered to the demand made of the respondents. The research must limit to the point where the researcher was not to be expected too much and to be sought out to get reasonable answers to research. So the researcher eliminated all questions pertaining to data readily and accurately available from the NAAC manual, NAAC website, PTR and accreditation Grade sheets.

Step- 4

Care was taken about the length of questionnaires in the fourth step. The questions excluding the AA process were removed. The questions having multiple responses were removed from the questionnaires. Overlapped and same questions about facts or other aspects were also removed from all four questionnaires.

Step- 5

In the fifth step, rough outlines of the questionnaires were prepared. Questions on the same sub-topic or aspect were grouped under particular components of questionnaires.

The questionnaires were given a semblance of order to maintain and orient the respondent to the flow of thought. The questions of each questionnaire were categorised in different components under four main categories- Professional detail of the respondent, manual for AA, the procedure for AA, and role and contribution of respondents in AA.

Step-6

In the sixth step, more general questions of a set of inquiries were kept first, followed by more detailed or specific questions, giving grouped responses about the question. The questions were put in order to preparation for AA and the schedule for the Peer Team visit. The questions related to each other were also put together in a logical sequence.

Step-7

In the seventh step, the drafts of questionnaires were shown to the guide and discussed questions. After discussion with the guide, the questions related to multiple directional responses, feedback about co-assessors, demand from Assessors, the familiarity of Assessors to the TEI, comparison between stakeholders' responses and SAR, manipulation of documents, offer to Assessor for future service, and confidential matter related to the decision of grade and PTR were removed from the Questionnaires. The misinterpreted questions were modified or deleted. The questions for inquiry about the quality and functioning of TEI were also removed. Few open-ended questions were modified to close-ended, wherever required and feasible.

The questionnaires were divided into five phases- Demographic information of respondents, Assessors' training and visit to HEIs for AA, Prior AA, During AA and After AA of TEI. Some questions were modified according to language and the research study point of view. Questions were added related to the number of days for AA, time available for meeting, visit practice teaching schools, the performance of Assessors, and observations of Assessors about AA process of TEI. Few questions were guided to be switched to Opinionnaire and a five-point scale. Table no. 3.1 to 3.4 shows components and types of questions for the first drafts of all four questionnaires.

Table 3.1

Components of Questionnaire for Assessors (First Draft)

Sr. No.	Component	Types of questions		
		Open- ended	Close- ended	Total Questions
1)	<u>Demographic information of Respondent</u> <u>Assessors' Training and visits to HEIs for AA</u>	4	1	5
2)	Accreditation detail of TEI	3	1	4
3)	Academic and administrative experience of Assessors	1	3	4
4)	Appointment and training for assessment and accreditation	2	6	8
5)	Feedback about process prescribed by NAAC	2	5	7
6)	Assessment of HEI and TEI	2	3	5
7)	Number of days for AA <u>Prior to AA of the TEI</u>	1	2	3
8)	Intimation about the visit to TEI for AA	2	1	3
9)	Feedback about the co-assessors' role	2	2	4
10)	Modification in Peer Team visit programme <u>During AA of the TEI</u>	3	1	4
11)	Document and other validation	2	1	3
12)	Facilities to Assessors	2	4	6
13)	Time available for meeting with stakeholders	-	3	3
14)	Practice teaching schools visit	1	4	5
15)	Performance of Assessors	2	4	6
16)	Difficulty faced in AA of TEI	3	2	5
17)	Interaction amongst Peer Team members <u>After AA of the TEI</u>	2	5	7
18)	Time spent by Peer Team for AA	2	4	6
19)	Preparation of PTR and Grade sheet	4	4	8
20)	Feedback about Manual and process of AA	9	3	12
Total		49	59	108

Table 3.2

Components of Questionnaire for Principals-IQAC Coordinators (First Draft)

Sr. No.	Component	Types of questions		
		Open- ended	Close- ended	Total Questions
1)	<u>Demographic information of Respondent</u>	4	1	5
2)	Accreditation detail of TEI	3	1	4
	<u>Prior to AA of the TEI</u>			
3)	Feedback about manual and process prescribed by NAAC	-	3	3
4)	Preparation for assessment of TEI	1	6	7
5)	Intimation about the visit to TEI for AA	2	2	4
6)	Amount of expense from TEI	1	1	2
	<u>During AA of the TEI</u>			
7)	Peer Team visit programme	1	3	4
8)	Document and other validation	2	4	6
9)	Facilities to Assessors	2	2	4
10)	Stakeholders' meeting with Peer Team	1	5	6
11)	Practice teaching schools visit	2	2	4
12)	Performance of Assessors	1	3	4
13)	Interaction with Peer Team about PTR and Grade sheet	2	1	3
14)	Problems to Peer Team about AA	3	4	7
	<u>After AA of the TEI</u>			
15)	Time spent by Peer Team for AA	1	2	3
16)	Performance of Peer Team	3	4	7
17)	Feedback about Manual and process of AA	9	3	12
	Total	38	47	85

Table 3.3

Components of Questionnaire for Teaching Faculty (First Draft)

Sr. No.	Component	Types of questions		
		Open-ended	Close-ended	Total Questions
1)	<u>Demographic information of Respondent</u>	4	1	5
2)	Accreditation detail of TEI	3	1	4
	<u>Prior to AA of the TEI</u>			
3)	Feedback about manual and process prescribed by NAAC	-	3	3
4)	Preparation for assessment of TEI	1	6	7
5)	Amount of expense from TEI	1	1	2
	<u>During AA of the TEI</u>			
6)	Peer Team visit programme	1	3	4
7)	Document and other validation	2	2	4
8)	Facilities to Assessors	2	2	4
9)	Stakeholders' meeting with Peer Team	1	2	3
10)	Performance of Assessors	1	3	4
11)	Problems to Peer Team about AA	3	4	7
	<u>After AA of the TEI</u>			
12)	Time spent by Peer Team for AA	1	2	3
13)	Performance of Peer Team	3	4	7
14)	Feedback about Manual and process of AA	9	3	12
	Total	32	37	69

Table 3.4

Components of Questionnaire for Supporting Staff (Added Later)

Sr. No.	Component	Types of questions		
		Open- ended	Close- ended	Total Questions
1)	<u>Demographic information of Respondent</u>	2	1	3
2)	Accreditation detail of TEI	3	1	4
	<u>Prior to AA of the TEI</u>			
3)	Preparation for assessment of TEI	1	2	3
4)	Amount of expense from TEI	1	1	2
	<u>During AA of the TEI</u>			
5)	Document and other validation	2	2	4
6)	Facilities to Assessors	2	2	4
7)	Meeting with Peer Team	1	2	3
8)	Performance of Assessors	1	3	4
9)	Problems to Peer Team about AA	2	4	6
	<u>After AA of the TEI</u>			
10)	Time spent by Peer Team for AA	1	2	3
11)	Performance of Peer Team	3	4	7
12)	Feedback about Manual and process of AA	9	3	12
	Total	28	27	55

Step-8

In the eight-step, all four questionnaires were given/shown to the experts in Teacher Education and NAAC assessment and accreditation, i.e., Assessors of NAAC, Head/ Principals of TEIs, Teacher Educators, Research Scholars and Language experts for expert validity. The researcher asked for suggestions keeping the points in mind about questions- relevance of the research topic, in the boundary of AA process, the relevance of the role of respondents, expected interpretation by respondents, formation of items, the flow of the questions, clarity of language and politeness in language. Questionnaires were given to the following Experts for expert validity (table no. 3.5).

Table 3.5

Categories of Experts for Expert validity of the Questionnaires

Sr. No.	Categories of Experts	No. of Experts
1.	NAAC Assessors	04
2.	Head/ Principals of TEIs	02
3.	Teacher Educators/ Teaching Faculty	04
4.	Research Scholars	08
5.	Language Expert	01
Total		19

Experts validated the questionnaires and provided suggestions for the removal, addition or modification of some questions. The questions to be removed from the questionnaire were facilities provided to Assessors, amount of expense for AA process, earlier familiarity between Assessors and TEI, service offered to Assessors, the contradiction between SAR and responses of stakeholders, cooperation from stakeholders, the remarkable contribution of stakeholders in AA, manipulation done by TEI, CGPA-grade estimation from TEI and Assessors' comparison of TEI with earlier visited HEI/TEI.

Separate questions about feedback for the Assessment process were to be asked for Grading pattern, SAR, PTR and Overall suggestions. The words 'liberal Peer Team' were suggested to replace by 'Objective Peer Team'. Response of 'Do not' was suggested if the respondents were unaware of any answer.

The questions were to be deleted about demographic information of Principals-IQAC Coordinators, Teaching Faculty and Supporting Staff. Name and address of each Assessor, information about AA of TEI and role of individual Assessor in Peer Team were suggested to be provided by the researcher in the questionnaire only.

The questions in the questionnaire for Principals-IQAC Coordinators were suggested to be removed from questionnaires for Teaching Faculty and Supporting Staff. Some questions were suggested to be clubbed together as close-ended sub-questions. The questions were suggested to be put in sequential order as per the procedure for AA. Experts also suggested grammatical corrections in the language of the questionnaires. Some questions were suggested to be switched to the opinionnaires in form of statements.

Step-9

In the ninth step, the experts' suggestions were discussed with the guide and made thorough consideration on each item. The suggestions for removal, addition or modification were taken into consideration in the research study. Components of questionnaires connected to other components were needed to be clubbed together by the researcher. Final drafts of all four Questionnaires were constructed after discussion with Guide (Appendix- B to E). Component-wise questions of all four final questionnaires are shown in below given table no. 3.6 to 3.9.

Table 3.6

Components of Questionnaire for Assessors (Final Draft)

Sr. No.	Component	Types of questions		
		Open-ended	Close-ended	Total Questions
1)	Academic background <u>Training for Assessment and Accreditation</u>	1	1	2
2)	Appointment and training for assessment and accreditation	1	4	5
3)	Assessment of HEI and TEI <u>Prior to AA of the TEI</u>	0	2	2
4)	Preparation for assessment of TEI <u>During AA of the TEI</u>	1	3	4
5)	Document and other verification	1	7	8
6)	Meeting with stakeholders	-	4	4
7)	Practice teaching schools visit	1	3	4
8)	Difficulty faced in AA of TEI	3	3	6
9)	Interaction amongst Peer Team members <u>After AA of the TEI</u>	2	3	5
10)	Time spent by Peer Team for AA	2	2	4
11)	Preparation of PTR and Grade sheet	4	4	8
12)	Manual and process of AA	10	2	12
Total		26	38	64

Table 3.7

Components of Questionnaire for Principals-IQAC Coordinators (Final Draft)

Sr. No.	Component	Types of questions		Total Questions
		Open-ended	Close-ended	
<u>Prior to AA of the TEI</u>				
1)	Preparation for assessment of TEI	-	6	6
<u>During AA of the TEI</u>				
2)	Peer Team visit programme	1	1	2
3)	Document and other verification	1	2	3
4)	Meeting with Peer Team	-	4	4
5)	Difficulty to Peer Team about AA	3	2	5
6)	Interaction amongst Peer Team members	1	3	4
<u>After AA of the TEI</u>				
7)	Time spent by Peer Team for AA	1	2	3
8)	Performance of Peer Team	3	2	5
9)	Manual and process of AA	9	1	10
Total		19	23	42

Table 3.8

Components of Questionnaire for Teaching Faculty (Final Draft)

Sr. No.	Component	Types of questions		Total Questions
		Open-ended	Close-ended	
<u>Prior to AA of the TEI</u>				
1)	Preparation for assessment of TEI	2	4	6
<u>During AA of the TEI</u>				
2)	Peer Team visit programme	1	1	2
3)	Meeting with Peer Team	3	2	5
4)	Difficulty to Peer Team about AA	3	2	5
5)	Interaction amongst Peer Team members	1	3	4
<u>After AA of the TEI</u>				
6)	Time spent by Peer Team for AA	1	1	2
7)	Performance of Peer Team	1	1	2
8)	Manual and process of AA	9	1	10
Total		21	15	36

Table 3.9

Components of Questionnaire for Supporting Staff (Final Draft)

Sr. No.	Component	Types of questions		Total Questions
		Open-ended	Close-ended	
<u>Prior to AA of the TEI</u>				
1)	Preparation for assessment of TEI	2	4	6
<u>During AA of the TEI</u>				
2)	Meeting with Peer Team	3	2	5
<u>After AA of the TEI</u>				
3)	Time spent by Peer Team for AA	1	1	2
4)	Performance of Peer Team	1	1	2
5)	Manual and process of AA	5	1	6
Total		12	9	21

Table no. 3.6 shows 64 questions in the Questionnaire for Assessors, including 26 open-ended and 38 close-ended questions. Table no. 3.7 shows the Questionnaire for Principals-IQAC Coordinators contained 42 questions, including 19 open-ended and 23 close-ended questions. Table no. 3.8 shows 36 questions in the Questionnaire for Teaching Faculty, including 21 open-ended and 15 close-ended questions. Table no. 3.9 shows 21 questions in the Questionnaire for Supporting Staff, including 12 open-ended and nine close-ended questions. The open-ended and close-ended questions were either put separately or clubbed together as a set of questions.

3.4.3 Opinionnaires for Assessors, Principals-IQAC Coordinators and Teaching Faculty

Opinionnaires for Assessors, Principals-IQAC Coordinators and Teaching Faculty, were constructed by following steps indicated by Mouly (1970) in his book entitled "The Science of Educational Research". The researcher constructed three opinionnaires for receiving opinions from respondents about the accreditation process conducted by NAAC. Following steps were followed by the researcher for the construction of opinionnaires.

Step- 1

The first step in constructing an adequate opinionnaire was to attain a thorough grasp of the field and a clear understanding of the study's objectives and the nature of the data needed. In the present study, the researcher went through the Manual for Self-Appraisal of TEIs applied from 1st April 2007, Manual for Peer Team and NAAC Newsletters. Review of related studies indicated about construction and utilisation of opinionnaires. About the Accreditation process, Joicy (2011) constructed Opinionnaire with a five-point scale for student-teachers and teacher educators; and Pillai and Srinivas (2006) collected opinions from principals. The researcher conceptualised statements of Opinionnaires for Assessors, Principals- IQAC Coordinators and Teaching Faculty based on documents of the first step.

Step- 2

The second step was to conduct unstructured interviews with the persons who were familiar with the field. The researcher personally met with Assessors, Principals of colleges, IQAC Coordinators and Teaching Faculties and discussed. Various points of discussion for preparation statements of opinionnaires were readiness of Assessor for AA process, manual and criteria for AA of TEI, quality in TEI, facilities to Assessors for AA, the duration for AA, meetings with stakeholders, AA process, cooperation amongst Assessors, arrangement of documents, manual and process, and allotted CGPA and grade.

The researcher conceptualised statements and noted discussion points to construct a separate opinionnaire for Assessors, Principals-IQAC Coordinators and Teaching Faculty.

Step- 3

The third step was the precise length of the opinionnaire. Instead of infinite length, a limit must be considered to the demand made of the respondents. The research must limit to the point where the researcher was not to be expected too much and to be sought out to get reasonable answers to research. So the researcher eliminated all questions about data readily and accurately available from the NAAC manual, NAAC website, PTR and accreditation Grade sheets.

Step- 4

In the fourth step, care was taken about the length of the opinionnaire. The statements excluding the AA process were removed. The statements in negative formation were modified. Overlapped and same statements about fact were removed.

Step- 5

In the fifth step, rough outlines of the opinionnaires were constructed by the researcher. The statements were grouped under components of opinionnaires and given a semblance of order to maintain and orient the respondent to the flow of thought. The statements of each opinionnaire were categorised in different components under four main categories- manual for AA, the procedure for AA, meetings with stakeholders, and allotment of CGPA and grade.

Step-6

In the sixth step, the statements were put to prepare for AA and the procedure for Peer Team visit. The drafts of three opinionnaires were constructed for Assessors, Principals-IQAC Coordinators and Teaching Faculty. The five points of response as opinion were highly satisfied, satisfied, unsure, dissatisfied and highly dissatisfied.

Step-7

In the seventh step, the drafts of opinionnaires were shown to the guide and discussed statements. After discussion with the guide, the statements related to the readiness of the Assessor for the AA process, cooperation amongst Assesses, and allotted CGPA and grade were removed from the opinionnaires. Table no. 3.10 shows components statements for the first drafts of all three opinionnaires.

Table 3.10

Components of Opinionnaires for Assessors, Principals-IQAC Coordinators and Teaching Faculty (First Draft)

Sr. No.	Component	No. of Statements for		
		Assessors	Principals-IQAC Coordinators	Teaching Faculty
<u>Prior to AA of the TEI</u>				
1)	Manual and criteria for AA of TEI	5	4	4
2)	Quality in TEI	3	-	-
<u>During AA of the TEI</u>				
3)	Provisions for AA by TEI	5	4	3
4)	Facilities to Assessors for AA	2	2	2
5)	Duration for AA	2	2	2
6)	Meetings with stakeholders	10	8	8
<u>After AA of the TEI</u>				

7) Process of AA	4	6	3
Total	23	26	13

Step-8

In the eight-step, all three opinionnaires were given/ shown to the experts in the field of education and NAAC assessment and accreditation process, i.e., Assessors of NAAC, Head/ Principals of TEIs, Teacher Educators, Teaching Faculty, Research Scholars and Language experts for expert validity. The researcher asked for suggestions keeping the points in mind about statements- relevance of the research topic, in the boundary of AA process, the relevance of the role of respondents, expected interpretation by respondents, formation of items, the flow of the questions, clarity of language and politeness in language. Opinionnaires were given to the following Experts for expert validity (table no. 3.11).

Table 3.11

Categories of Experts for Expert validity of the Opinionnaires

Sr. No.	Categories of Experts	No. of Experts
6.	NAAC Assessors	04
7.	Head/ Principals of TEIs	02
8.	Teacher Educators/ Teaching Faculty	04
9.	Research Scholars	08
10.	Language Expert	01
Total		19

Experts validated the opinionnaires and provided suggestions for the modification of statements. The statements were suggested to be removed related to quality in TEI and duration for AA. Statements related to the Manual for AA, provisions for AA by TEI, facilities to Assessors for AA, meetings with stakeholders, and the AA process were modified.

Step-9

In the ninth step, the experts' suggestions were discussed with the guide and made thorough consideration on items of opinionnaires. The suggestions were applied in consideration of the research study. Final drafts of all three opinionnaires were constructed after discussion with the guide (Appendix- F to H). Component-wise statements of all three opinionnaires are shown in table no. 3.12.

Table 3.12

Components of Opinionnaires for Assessors, Principals-IQAC Coordinators and Teaching Faculty (Final Draft)

Sr. No.	Component	No. of Statements for		
		Assessors	Principals-IQAC Coordinators	Teaching Faculty
<u>Prior to AA of the TEI</u>				
1)	Manual for AA	4	4	4
<u>During AA of the TEI</u>				
2)	Provisions for AA by TEI	4	2	1
<u>After AA of the TEI</u>				
3)	Time spent by Peer Team for Meeting	7	7	1
4)	Process of AA	3	3	1
Total		18	16	7

Table no. 3.12 shows 18 statements in the opinionnaire for Assessors, 16 statements in the opinionnaire for Principals-IQAC Coordinators and seven statements in the opinionnaire for Teaching Faculty.

3.4.4 Scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty

A Scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty, was constructed by following steps indicated by Mouly (1970) in his book entitled "The Science of Educational Research". The researcher constructed a scale for receiving responses from respondents about the accreditation process conducted by NAAC. The researcher followed the following steps to construct a scale.

Step- 1

The first step in the construction of an adequate scale was to attain a thorough grasp of the field and a clear understanding of the study's objectives and the nature of the data needed. In the present study, the researcher went through the Manual for Self-Appraisal of TEIs applied from 1st April 2007. The researcher conceptualised the items for scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty based on documents of the manual.

Step- 2

The second step was to conduct unstructured interviews with the persons who were familiar with the field. The researcher met with Assessors, Principals, IQAC

Coordinators and Teaching Faculty and discussed seven criteria and 36 key aspects provided by NAAC in the manual for AA of TEI. The researcher conceptualised items of scale and noted points of discussion to construct a scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty.

Step- 3

The third step was the precise length of the scale. Instead of infinite length, a limit must be considered to the demand made of the respondents. The research must limit to the point where the researcher was not to be expected too much and to be sought out to get a reasonable response to research.

Step- 4

In the fourth step, care was taken about the length of the scale. The items of scale were constructed with the help of the manual for seeking appropriateness of the criteria and key aspects for AA implemented by NAAC.

Step- 5

In the fifth step rough outline of the scale was constructed by the researcher. The items of key aspects were grouped under specific criteria, and items were given a semblance of order to maintain and orient the respondent to the flow of thought. The items of the scale were categorised into eight components.

Step-6

In the sixth step, more general items of a set of inquiries were kept first, followed by more detailed or specific items, which given grouped responses about the question. The items were put in order to manual and put together in a logical sequence. The key aspects were put under particular criteria. The five points for responses were absolutely appropriate, partly appropriate, undecided, partly appropriate and absolutely appropriate.

Step-7

In the seventh step, the draft of the scale was shown to the guide and discussed items. The scale was added an open-ended question to each criterion for seeking response about feedback for specific criteria. Items of the scale were clubbed together with suggestions of respondents about the weightage for each key aspect. The first draft of the scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty was divided into eight components given in table no. 3.13.

Table 3.13

Components of Scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty (First Draft)

Sr. No.	Component	Types of Items		Total Items
		Open-ended	Close-ended	
1)	Items for Criterion- I: Curricular Aspects	6	6	12
2)	Items for Criterion- II: Teaching-Learning and Evaluation	7	6	13
3)	Items for Criterion- III: Research, Consultancy and Extension	7	7	14
4)	Items for Criterion- IV: Infrastructure and Learning Resources	7	7	14
5)	Items for Criterion- V: Student Support and Progression	5	4	9
6)	Items for Criterion- VI: Governance and Leadership	7	6	13
7)	Items for Criterion- VII: Innovative Practices	4	4	8
8)	Items for Overall feedback	4	-	4
Total		47	40	87

Step-8

In the eight-step, the five-point scale was given/ shown to the experts in Teacher Education and familiar with NAAC assessment and accreditation process, i.e., Assessors of NAAC, Head/ Principals of TEIs, Teacher Educators, Teaching Faculty, Research Scholars and Language experts for expert validity. The researcher asked for suggestions keeping the points in mind about scale- relevance of the research topic, in the boundary of AA process, the relevance of the role of respondents, expected interpretation by respondents, formation of items, the flow of the thought about the items, clarity of language and politeness in language. The scale was given to the following Experts for expert validity (table no. 3.14).

Table 3.14

Categories of Experts for Expert validity of the scale

Sr. No.	Categories of Experts	No. of Experts
11.	NAAC Assessors	04
12.	Head/ Principals of TEIs	02
13.	Teacher Educators/ Teaching Faculty	04
14.	Research Scholars	08
15.	Language Expert	01
Total		19

Experts validated the scale and provided suggestions for items of the scale. Items of the scale were about getting responses for the appropriateness of the key aspect. The experts suggested asking open-ended questions for each criterion seeking responses in form of suggestions from respondents to remove any key aspect and add any point as a key aspect. The feedback about the quality of TEI and perceptions of others about AA were suggested to be removed.

Step-9

In the ninth step, the suggestions of experts were discussed with the guide and made thorough consideration on each item. The criterion-wise items in a five-point scale and suggestions for weightage were put in the scale. Each criterion had open-ended questions about removing and adding any point as a key aspect to a particular criterion. The overall feedback was asked by two open-ended questions- overall suggestion for manual and feedback about the schedule for manual.

The final draft of the scale was constructed after discussion with Guide (Appendix- I). Component-wise items of the scale are shown in table no. 3.15.

Table 3.15

Components of Scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty (Final Draft)

Sr. No.	Component	Types of Items		
		Open-ended items	Items for five-point scale (Close-ended)	Total Items
1)	Items for Criterion- I:	9	5	14

Curricular Aspects				
2)	Items for Criterion- II: Teaching-Learning and Evaluation	10	6	16
3)	Items for Criterion- III: Research, Consultancy and Extension	10	6	16
4)	Items for Criterion- IV: Infrastructure and Learning Resources	10	6	16
5)	Items for Criterion- V: Student Support and Progression	8	4	12
6)	Items for Criterion- VI: Governance and Leadership	10	6	16
7)	Items for Criterion- VII: Innovative Practices	7	3	10
8)	Items for Overall feedback	2	-	2
Total		66	36	102

Table no. 3.15 shows 102 items in scale for Assessors, Principals-IQAC Coordinators and Teaching Faculty. The scale contained 36 items for a five-point scale and 66 open-ended items as suggestions for values of weightage and questions.

3.5 DATA COLLECTION

The data about Accreditation status included types of TEIs and accreditation results. The types of TEIs were Area, Financial Type and Accreditation Cycles. The accreditation results were weightage of scores, CGPA and grade letter of TEIs given in particular Grade sheet along with PTR of TEI.

The NAAC had uploaded data of accredited HEIs along with hyperlinked PTR on its website. Any website visitor may generate a specific list of assessed and accredited HEIs by search of a particular state, the specific name of an institution or other related searches. The researcher visited the NAAC website and generated a list (NAAC, 2015a) of NAAC accredited HEIs and TEIs in Microsoft Office Excel format. The list was shown that the NAAC has assessed and accredited 435 HEIs of universities of Gujarat state till March 2015. The 435 HEIs included 73 TEIs out of 315 TEIs from the Universities of Gujarat State. Out of those 73 TEIs, NAAC had assessed 59 TEIs by the new methodology for AA of TEIs from April 2007 to March 2015. The 'Not

Accredited' status was given to a TEI, so the 'Accredited' TEIs were 58. An accredited TEI was not General TEI but a Language-specific (English) TEI. So, a scrutinised list of 57 accredited TEIs was drawn from the excel list. The list of accredited TEIs had only a few details of TEI, i.e., name of the institute, location, accreditation status, Executive Committee (EC) data, Cycles and allotted Grade. PTR and Grade sheet of specific TEI contained other details like details of Assessors; dates of Peer Team visit; area and financial type of TEI, criterion-wise Grade Point Average (GPA) and university affiliation detail.

The softcopies of PTRs were available from the hyperlink given in the online list of accredited TEI on the NAAC website. All 57 PTRs of the accredited TEIs were downloaded, where few of the PTRs were unavailable on the website.

The NAAC did not upload the accreditation Grade sheets of TEIs along with the PTRs. So, the researcher wrote a letter to the NAAC office, Bangalore, to get the Grade sheets. Later on, the NAAC had updated the Grade sheet of respective TEI to PTR. Those updated PTRs of accredited TEIs were re-downloaded for the present study. Even a few PTRs were incomplete or not uploaded on the NAAC website. The researcher listed out those TEIs and got them from specific TEIs on request. The detail of affiliation to the University was added from a list of TEIs prepared by the researcher. Thus, the PTRs and Grade sheets were collected from the NAAC website and TEIs. Then the data of the same excel list was updated from the details of PTRs and Grade sheets, i.e., Financial type, Regional Area, Date of Peer Team Visit, Date of Accreditation, Accreditation valid up to, criterion-wise CGPA, overall CGPA, Grade and information about Assessors. The list was organised in separate sheets also like Name-wise, University-wise, Date-wise and CGPA-wise. The excel list of all 57 accredited TEIs was updated, and prepared all data entitled 'Accreditation Data Excel File' (ADEF) (Appendix- J). Researcher has created a map from Google map (Appendix- K).

Data collection of observations provided by the Peer Team during AA of the TEIs was carried out with the PTRs. The Peer Team of respective TEI provided Key aspects-wise observations in PTR.

Data collection from Questionnaires has required an approach to Assessors. The names and addresses of Assessors were copied in excel format from the PTRs. The Assessors were from outside Gujarat State and at scattered locations in India or abroad. They were at the higher or highest position in University or superannuated from the service. So, the data collection from Assessors was required their contact. The addresses and

contact numbers of Assessors were collected from the NAAC website. The latest information of addresses and contact numbers of all Assessors of 57 TEIs were obtained from visiting their workplace website or contacting other Assessors. The details of the Assessors for data collection were updated in an excel file by the researcher.

Concerning data collection from respondents, TEIs' addresses and contact numbers of TEIs were required. Each affiliating University had a list of TEIs as a textual list or hyperlink of TEI. Continuation of NCTE recognition of particular TEI was required to be verified from any authentic source. The list on the University website was also required to be verified. So, the list of TEIs uploaded on the NCTE website was downloaded. That list was also required few updates. After discussion with Experts, the University diary of the year 2015 and the admission forms of the year 2015 were suggested as a strong, authentic source for preparation of list to affiliated TEIs. Thus, true names of TEIs were collected from different institutions and updated the list of TEIs with the required details for study.

Hard copies of Questionnaires, Opinionnaires and a Scale, along with a self-address envelope with postage charges, were sent by post to Assessors and TEIs (Principals, IQAC- Coordinators, Teaching Faculty and Supporting Staff). Few tools were given personally to respondents. Data collection was started in March 2018 and continued till December 2019. After sending tools to the respondents, it was asked about filling up the responses and about the return. Reminders were given to the respondents via phone calls or Postcards. Even the tools were resent to few respondents. Thanking postcards were also sent to Assessors who have returned the filled questionnaires.

3.6 DATA ANALYSIS

The data were divided into sections according to the objectives of the present study. Data analysis was carried out by statistical calculations and content analysis.

The overall Accreditation status of TEIs was carried out by Frequency and Percentage calculation with the help of Microsoft Office Excel.

The Seven Criteria and Overall CGPA from Grade sheets of all TEIs were compared using t-test and correlation. The data about criterion-wise and Overall CGPA of every TEI prepared in the ADEF were filtered in Area, Financial type and two accreditation Cycles. The score of Seven Criteria and Overall CGPA from the filtered data were used to calculate Mean, Standard Deviation, Standard Error of Mean and t-value. The level

of significance was found from the t-value of every calculation. The values of correlation were calculated from the ADEF data of the scores of CGPA on Seven Criteria and Overall CGPA of all, Urban, Rural, Grant-in-Aid, Self-financed, Cycle-1 and Cycle-2 of TEIs.

The Observations provided by Peer Teams in the PTRs for each key aspect under each criterion, overall analysis and recommendations from PTRs of all 57 TEIs were put in Microsoft Office Excel. The Observations were analysed using Content Analysis, Frequency distribution and Percentage.

All responses in the Questionnaires, Opinionnaires and Scales were analysed using Content Analysis, Frequency distribution and Percentage calculation with the help of Microsoft Excel and a trial version of Statistical Package for the Social Sciences (SPSS). Percentages and frequencies were computed, and Chi-square was used in Opinionnaire and a five-point scale to study the differences in the various categories given.

Table no. 3.16 shows the plan and procedure for the present study.

Table 3.16

Table for Plan and Procedure

Sr. No.	Objective	Popul ation	Sample	Tool and Technique	Data Collection	Data Analysis
1.	(1) To study the overall Accreditation status of Teacher Education Institutions (TEIs) of Gujarat State accredited by National Assessment and Accreditation Council (NAAC)	57 TEIs	57 TEIs	Document of Grade sheets of accredited TEIs	NAAC Website/ TEIs	- Frequency - Percentage calculation
2.	(2) To compare the Cumulative Grade Point Average (CGPA) on Seven Criteria for Urban and Rural area TEIs	57 TEIs	57 TEIs	Document of Grade sheets of accredited TEIs	NAAC Website/ TEIs	- Mean, Standard Deviation, Standard Error of Mean, t-value - level of significance from t-value in Microsoft Office Excel
	(3) To compare the Overall CGPA for Urban and Rural area TEIs					
	(4) To compare the CGPA on Seven Criteria for Grant-in-Aid and Self-financed TEIs					
	(5) To compare the Overall CGPA for Grant-in-Aid and Self-financed TEIs					
	(6) To compare the CGPA on Seven Criteria for Cycle-1 and Cycle-2 TEIs					
	(7) To compare the Overall CGPA for Cycle-1 and Cycle-2 TEIs					
	(8) To compare the CGPA on Seven Criteria for Urban Grant-in-Aid and Urban Self-Financed TEIs					
	(9) To compare the Overall CGPA for Urban Grant-in-Aid and Urban Self-Financed TEIs					

- (20) To study the relationship amongst the Seven Criteria based on CGPA for Rural TEIs
- (21) To study the relationship between Overall CGPA and CGPA on Seven Criteria for Rural TEIs
- (22) To study the relationship amongst the Seven Criteria based on CGPA for Grant-in-Aid TEIs
- (23) To study the relationship between Overall CGPA and CGPA on Seven Criteria for Grant-in-Aid TEIs
- (24) To study the relationship amongst the Seven Criteria based on CGPA for Self-financed TEIs
- (25) To study the relationship between Overall CGPA and CGPA on Seven Criteria for Self-financed TEIs
- (26) To study the relationship amongst the Seven Criteria based on CGPA for Cycle-1 accredited TEIs
- (27) To study the relationship between Overall CGPA and CGPA on Seven Criteria for Cycle-1 accredited TEIs
- (28) To study the relationship amongst the Seven Criteria based on CGPA for Cycle-2 accredited TEIs
- (29) To study the relationship between Overall CGPA and CGPA on Seven Criteria for Cycle-2 accredited TEIs

4. (30) To analyse the observations of Peer Team Reports

57	57	NCTE website, NAAC	- Content
TEIs	TEIs	website of Website	Analyses
		respective TEI/ and TEIs	- Frequency
		University and	distribution
		its admission	- Percentage (with
		form	the help of
			Microsoft Excel
			and a trial
			version of SPSS)

5. (31) To study the opinions of the following Assessors of NAAC accredited TEIs about assessment and accreditation of TEIs

- Chairperson of the Peer Team
- Member Coordinator of the Peer Team
- Member of the Peer Team

		<u>Chairpersons (Random Sampling)</u>	- Content
57	8	Questionnaire, Personally	Analyses
		Opinionnaire	- Frequency
		and Scale	distribution
		<u>Member Coordinators (Random Sampling)</u>	- Percentage
57	10	Questionnaire, Personally	(with the help of
		Opinionnaire	Microsoft Office
		and Scale	Excel and a trial
		<u>Members of the peer team (Random Sampling)</u>	version of SPSS)
57	11	Questionnaire, Personally	- Chi-square
		Opinionnaire	
		and Scale	

6. (32) To study the opinions of the following stakeholders of NAAC accredited TEIs

- Principal
- IQAC Coordinator
- Teaching Faculty
- Supporting Staff

Principals (Random Sampling)

57 15 Questionnaire, Personally - Content
Opinionnaire Analyses
and Scale - Frequency

IQAC Coordinators (Random Sampling)

57 11 Questionnaire, Personally - Percentage
Opinionnaire (with the help of
and Scale Microsoft Office

Teaching Faculty (Random Sampling)

342 31 Questionnaire, Personally Excel and a trial
Opinionnaire version of SPSS)
and Scale - Chi-square

Supporting Staff (Random Sampling)

57 10 Questionnaire Personally