

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1.0 INTRODUCTION

Review of related literature generates an actual image in front of the researcher about the work that has been carried out in past in the area of investigation to be taken up by the researcher. Review of literature is essential for every investigator to be up to date with the concerned information about the literature. It avoids the replication of the study of findings to take an advantage from similar or related literature as regards to methodology, techniques of data collection, procedure adopted and conclusion drawn. It allows justifying one's own endeavour in the field. It facilitates the researcher by providing the latest account and discussion of the research findings in a particular area of research which in turn gives an insight to the methodology. It provides a source of problem of study and the researcher formulates hypothesis on the basis of review of literature.

2.2.0 REVIEW OF RELATED LITERATURE

Researcher came across sixty six studies related to the present study. The reviewed studies were categorized under three sections viz., studies related to the critical thinking, studies related to the teaching English and studies related to the Open Book Examination.

2.2.1 Review of Studies Related to critical thinking

A total ten studies have been reviewed on critical thinking which are presented in abstract form in the following paragraph.

Meghani (1999) studied effectiveness of a teaching-learning strategy to develop critical thinking in students of standard XI using psychology as content. Objectives of the study were (a) to evolve a strategy for teaching-learning critical thinking in students of std. XI using the subject Psychology as the content; (b) to develop a tool, measuring critical thinking in students of std. XI; (c) to find the effectiveness of the evolved strategy for teaching-learning critical thinking. The study was developmental

in nature. The sample of the study were 12 students - all who have opted for Arts stream at the Higher Secondary level and also have Psychology as one of their subjects. The design employed for the study was one group – pretest-post-test design. Self-constructed tool for measuring critical thinking was used before and after intervention programme. Single group t-test was employed to find out the differences between pre-test and post-test. Major findings of the study were (a) the result of the t-test shows that the evolved strategy for teaching learning critical thinking has been effective in developing critical thinking in students; (b) students demonstrated their ability to think independently through logical reasoning and justification having the ability to evaluate arguments/beliefs/opinion and a few students learnt to compare and contrast analogies; (c) students showed the ability to think dialectically and they were able to apply knowledge in a new situation; (d) almost all students demonstrated critical reading skills and showed improvement in questioning skill; (e) students show improvement on their ability to think reflectively and they were also imbibed affective dimensions of critical thinking like intellectual autonomy, intellectual empathy, intellectual courage and intellectual humility.

Paily (1999) carried out a research on development of critical thinking among secondary school students in relation to some psycho-contextual variables. Major objectives of the study were to establish the norms for critical thinking ability, levels of critical thinking, correlation between critical thinking and intelligence and correlation between critical thinking and academic achievement of the secondary school students in the state of Goa. Descriptive comparative survey method was used in this study. 27 schools (10% of the total population) of each of the four categories were selected using stratified random sampling technique. The final data producing sample was consisted 918 students of Class X in the state of Goa. Tools viz. Watson-Glaser Critical Thinking Appraisal (WGCTA), Form-S developed by Watson and Glaser, Culture Fair Intelligence Scale-III by Cattell et. al., Critical Thinking Teacher Behaviour Inventory, self constructed Home Background Data Sheet and information schedule were used for gathering data. Different statistical techniques were used for data analysis such as Pearson's Product Moment Method of Correlation and partial correlation, t-test, ANOVA, ANCOVA, Frequency and percentage analysis and content analysis. Major findings were (a) standard X students included in the study found to have average level of critical thinking; (b) significant positive but low

correlation between critical thinking and intelligence; (c) significant positive but low correlation between critical thinking and academic achievement: (d) use of different critical thinking teaching strategies by teachers in teaching different subjects helps in developing critical thinking ability of the students.

Lee (2004) studied the effects of divergent thinking training/instruction on Torrance 65 tests of creative thinking and creative performance. Using quasi-experimental design, with pre-tests and post-tests measures with multiple probes, the effect of divergent thinking training on creative worksheets, the Torrance test of creative thinking and story based problem solving tasks were investigated. Explicit instructions for originality enhanced the originality scores on creative worksheets and explicit instruction for fluency enhanced the fluency scores on both figural and verbal creative worksheets for experimental group members.

Laila (2006) did a study entitled ‘Efficacy of problem solving and inquiry training on the development of divergent thinking ability among high school girls.’ Major objectives of the study were to study the effect of the teaching through problem solving and inquiry training in comparison to the traditional method of teaching on fluency (word, ideational, associational and expressional), flexibility (spontaneous and adoptive), originality, elaboration and total divergent thinking of the 10th grade female students. 400 students from 9th grade were taken up randomly as a sample from Baramulla hilly region. The divergent production ability test developed by K. N. Sharma and Mixed type group test of intelligence developed by P. N. Mehrotra were used to collect the data on the divergent thinking and verbal and non-verbal intelligence of the subjects. Significant difference was found while teaching through problem solving and inquiry training in comparison to the traditional method of teaching on fluency (word, ideational, associational and expressional), flexibility (spontaneous and adoptive) and elaboration. No significant difference was found while teaching through problem solving and inquiry training in comparison to the traditional method of teaching on originality and total divergent thinking.

Kaur (2009) studied effectiveness of outdoor environmental education program for enhancing critical thinking, social skills and responsible environmental behaviour among fifth grade students. Major objectives of the study were (a) to develop outdoor environmental education program for class V students in environmental studies; (b) to

compare the effectiveness of outdoor environmental education program and traditional instruction for enhancing critical thinking among students with high, average, and low intelligence; (c) to study the relationship between critical thinking and social skills of class V students; (d) to study the relationship between critical thinking and responsible environmental behaviour of class V. 300 students were the sample collected from two schools which were selected purposively. Self-constructed instructional material for implementing outdoor Environmental Education and Cornell Critical Thinking test Level X (2005) by Robert H. Ennis and M. Jason were used as tools for collecting data. Mean, S.D., t-test and 2x3 analysis of variance were employed for data analysis. Major findings were students taught environmental education by the outdoor environmental education program exhibited better mean gains on critical thinking as compared to students of control group, students with high intelligence exhibited significantly higher mean gain scores on critical thinking than students with low and average intelligence.

Patel (2011) developed critical thinking programme and its effectiveness for students of class IX. The main objectives were to construct and standardize critical thinking test and to study the effectiveness of programme enhancing critical thinking in relation to gender, SES and IQ. One group pre-test-post-test experimental design was followed. Anand High School from all the secondary schools of Anand City of Gujarat was selected randomly and all the students of standard IX of the Anand High School were selected as a sample. Standardized tools viz. self constructed critical thinking test, SES Scale by Pallavi Patel and verbal-nonverbal intelligence test by R.S. Patel were used to collect data. The data were treated by using F-test. The major findings of the study were (a) the mean score of students in post-test is higher than that of pre-test which shows the effectiveness of critical thinking programme; (b) there is no gender effect in effectiveness of critical thinking programme i.e. critical thinking programme is equally effective for boys and girls; (c) critical thinking of students having high SES is higher than that of students having low SES in post-test; (d) critical thinking programme is found equally effective for boys and girls having high SES in post-test; (e) critical thinking programme is found equally effective for boys and girls having low SES in post-test; (f) critical thinking of students having high IQ is higher than that of students having low IQ in post-test; (g) critical thinking programme is found equally effective for boys and girls having high IQ in post-test.

Deepa (2012) carried out a study on effect of co-operative learning on critical thinking and problem solving ability in mathematics among higher secondary students. Major objectives were to compare the difference between the pre test and the post test of the co-operative learning approach and the traditional method on critical thinking ability and problem solving among the higher secondary students with respect to achievement level. Research design was adopted the equivalent group pre test-post test design. Stratified random sampling technique was used. 214 students were taken class XI from two Government Aided schools namely St. Joseph's Higher Secondary school and St. Mary Goretti Higher Secondary School of Kanyakumari District. Self constructed tools viz. critical thinking ability test and problem solving ability test in Mathematics were used for collecting data. Findings of the study showed that the co-operative learning approach was more effective than the traditional method in developing critical thinking ability and problem solving ability among the higher secondary students, the co-operative learning approach was more effective than the traditional method in developing critical thinking ability among the high, the middle and the low achievers.

Seeja (2012) studied influence of active learning strategies on critical thinking, thinking styles and achievement among secondary school students. The main objectives of the study were to study the influence of active learning strategies on the thinking styles, critical thinking and interaction effects of intelligence on students' critical thinking of secondary school students and to study the relationship among critical thinking, thinking styles and achievement of secondary school students. Quasi experimental pre-test post-test two group design was adopted. Purposive sampling technique was used and samples were drawn from two intact divisions of standard IX. The sample for the study was finally taken to 41 each in experimental group and control groups. Standardized tools viz. Raven's Progressive Matrices Test, self constructed achievement test, Test on Critical Thinking Skills by R. Delphi, self-constructed Likert type critical thinking dispositions scale, Thinking Styles Inventory by Sternberg & Wagner were used to collect data. For analyzing the data, descriptive statistics was used to summarise the pre-test and post-test scores. Cronbach's alpha was used to establish internal reliability of the tool. t-test, ANCOVA, ANOVA and Partial Correlation were employed to test the various hypotheses. Percentages were used to analyse the data qualitatively. Major findings of the study were (a) the active

learning strategies were effective in improving the critical thinking skills of the secondary school students when the pre-test score of critical thinking skills and intelligence were taken as covariate; (b) it was statistically found that the active learning strategies were effective in enhancing all the dimensions of critical thinking skills – interpretation, inference, analysis, evaluation, explanation and self-regulation among the secondary school students; (c) the intervention was equally effective in improving the gain scores in critical thinking skills of the experimental group of students, irrespective of differences in intelligence and gender and their interactions; (d) the active learning strategies were effective in improving the critical thinking dispositions of the secondary school students when the pre-test score of critical thinking dispositions and intelligence were taken as covariate; (e) it was found that the active learning strategies were effective in enhancing the dimensions of critical thinking dispositions except inquisitiveness and self-confidence among secondary school students. The dimensions-objectivity, analytic, systematic and truth seeking were found to have improved by the implementation of active learning Strategies; (f) the intervention was effective in improving the gain scores in critical thinking dispositions of the experimental group of students, irrespective of differences in intelligence and gender and their interactions; (g) active learning strategies were effective in promoting legislative and judicial thinking style of secondary school students and were not supporting the executive thinking styles in them; (h) the active learning strategies were effective in improving the achievement of the secondary school students when the pretest score of achievement and intelligence were taken as covariate; (i) The study showed a positive significant correlation between critical thinking skills and critical thinking dispositions, critical thinking dispositions and judicial thinking style, critical thinking skills and achievement and judicial thinking styles and achievement.

Caldas (2013) conducted a study on engaging young learners in the process of English learning through critical thinking writing activities. Objectives of the study were to develop critical thinking in writing activities, to design a booklet with writing activities involving critical thinking. Both qualitative and quantitative research design was used in the study. The study was carried out on seventh grade students and the teachers who implemented critical thinking strategies in their classes. Interview, observation and activity sessions were conducted for measuring students' level of

critical thinking. The findings of the study showed that when a teacher uses Critical thinking strategies with children, they got more independent; their level of motivation began to grow while they were doing the activity. When students were faced with a challenging situation, they had to find answers and while searching for them, they begun to have fun. The survey suggested that the teachers who had some experience in applying Critical thinking skills in the classroom was very helpful because it confirmed the thinking behind the results from the observations done with the students. This survey validated the basic theory of Critical thinking skills. It stated that the implementation of these strategies may appear difficult, but often requires only a slight shift of the teacher's approach in his/her curriculum.

Singh (2014) studied the effect of cooperative learning on critical thinking social competence and achievement in social science of secondary school students. Major objectives of the study were to study the effect of Jigsaw method of cooperative learning, gender and their interaction on critical thinking skill and its dimensions by taking pre-test scores of critical thinking skill, critical thinking dispositions, social competence and achievement in social science as covariate; Three schools were randomly selected for item analysis of the test and assessing reliability of the test of class 9th from Ludhiana district. For the experimentation Govt. High School, Khasi Kalan was randomly selected from Ludhiana district. Two intact sections of IX class of the school were taken. The size of sample for experimentation was 116, out of these, 57 (Boys 35 + Girls 22) were taken randomly as experimental group and 59 (Boys 35 + Girls 24) were taken randomly as control group. The study was experimental in nature and it was designed non-equivalent pretest-posttest control group design. Following tools were used for collecting data viz. self-constructed critical thinking skills test, Critical Thinking in Everyday Life by Mincemoyer, Perkins & Munyua (2001), self-constructed achievement test in Social Science, Social Competence Scale by Rani and Sharma, self-constructed Cooperative Learning Modules. Measures of central tendency, S.D., skewness, Kurtosis, correlation and ANCOVA were followed for analyzing data. Major findings of the study were (a) critical thinking skill of students taught by Jigsaw method of cooperative learning was significantly better than students taught with traditional method of teaching; (b) gender differences were not found in Critical thinking skill of students taught by Jigsaw method of cooperative learning and students taught with traditional method of

teaching; (c) critical thinking skill was found independent of interaction between gender and group (teaching method); (d) analogy (1st dimension of critical thinking skill), interpretation (4th dimension of critical thinking skill) and inferences (7th dimension of critical thinking skill) of students taught by Jigsaw method of cooperative learning was significantly better than students taught with traditional method of teaching; (e) evaluating arguments (2nd dimension of critical thinking skill), logical analysis (3rd dimension of critical thinking skill), recognition of assumption (5th dimension of critical thinking skill) and deduction (6th dimension of critical thinking skill) of students taught by Jigsaw method of cooperative learning and traditional method of teaching do not differ; (f) critical thinking dispositions, social competency, communication skills and achievement in social science of students taught by Jigsaw method of cooperative learning was significantly better than students taught with traditional method of teaching.

2.2.2 Review of Studies Related to Teaching of English

Researcher came across 17 studies related to the teaching of English which are presented in abstract form as follow with its implications for the present study.

Dewal (1974) conducted a study of difficulties in teaching English and effectiveness of the programmed teaching. The main focus of the study was to identify the difficulties in teaching English and to develop a program for improving the communication skills. Major findings of the study indicated that as compared to the pre-test scores, the students scored more in the post-test which shows that the developed strategy was effective.

Charles (1981) conducted a study for developing language skills. The major objective of the study was to prepare audio instructional material and support material in English for the development of speaking reading and writing skills. The major finding indicated that all the techniques used were found to be effective in terms of learners' reaction.

Joseph (1983) conducted a study for teaching English grammar at high school level. The main objectives of the study were (a) evolvement of a strategy for teaching English grammar and (b) studying the effectiveness of the evolved strategy. This study aimed at development of multimedia instructional strategy that would be helpful

to teach grammar effectively and enhance the language skills. Some of the major findings were that (a) linear form of PLM was found to be least effective in terms of achievement and rating by the students (b) branching form of PLM was found to be more effective.

Kapadia (1988) conducted a study to identify grammatical errors in the written expression of the student who have passed HSSC. And to locate the areas of the high frequency of errors and to remediate those with the help of developed PLM. And also to study the effectiveness of the developed PLM in terms of the students' achievement was one of the objectives. The programmes were presented separately in which the result was positive as the mean score increased.

Jayashree (1989) conducted a study entitled "Identification of the difficulties in teaching and learning English as a second language among the high school students." The objectives of the study were to find out the difficulties of teachers and students in teaching and learning English as a second language in the high school. The seminar was conducted to find out the difficulties in teaching and learning of English. And the collected data were analyzed with mean, SD and t-test. The findings were the children's improper listening nature and their inattentiveness in class. They also found that the students were not interested in studying English.

Sharma (1985) conducted a study to design a course in written English for the high school stage: a communicative approach. The major findings of the study showed a large number of the students were poor in writing English and thus well designed communicative syllabus incorporating the needs of the students can be tension free and interactive classroom would create the satisfying and positive attitude towards learning writing and enhance the skill of writing and revising.

Salvi (1991) studied the effectiveness of concept attainment model for teaching concepts of the English language. Major objectives were (a) to compare concept attainment model and traditional method in terms of attainment of concepts of English, achievement in English and inductive reasoning, separately, by taking intelligence and previous achievement in English as covariates; (b) to study the contribution of intelligence, previous achievement in English and self-concept in the prediction of attainment of concepts of English, achievement in English and inductive reasoning, separately, of the students taught through concept attainment model and

traditional method, (c) to study the change in students' reaction towards concept attainment model. Two Gujarati medium schools were selected employing purposive sampling technique from Amdavad city. The sample comprised 207 students of Class IX. Of these, 96 students constituted the Experimental Group, while 111 students constituted the Control Group. The study was designed on the pretest-posttest control group design. Data collection was done using the following tools viz. self-concept inventory by J. H. Shah, Desai-Bhatt Group Intelligence test, Inductive Reasoning Test by Sarnath Sinh, English Attitude Scale by M.R.Upadhyay, reaction scale for concept attainment model by B.K. Passi & D.N. Sansanwal, English Concept Attainment Test prepared by the investigation. Correlated t-test, percentiles and coefficient of variation were computed to study the effectiveness of concept attainment model. Percentages of student responses to individual statements on the reactions scale were also computed and the comparison of concept attainment model and traditional method was done with the help of analysis of ANCOVA. Major findings of the study were (a) concept attainment model was found to be significantly superior to traditional method in terms of attainment of concepts of English, achievement in English and inductive reasoning of the students when the groups were matched statistically with respect to intelligence, previous achievement in English, (b) self-concept produced significant influence on the students' attainment of concepts of English and inductive reasoning of the students, previous achievement in English alone was found to predict achievement in English and intelligence was found to contribute substantially in the prediction of inductive reasoning in the case of the concept attainment model group but not in the case of the traditional method group (c) majority of the students expressed favourable reaction towards concept attainment model

Rajendran (1992) developed a programme on “Activities Centered Teaching of English: an Experimental study” The objective of the study was to, study the difference in achievement in reading and writing skills of the state taught under the conventional method and activity centered approach to teach English. The researcher found that there was no significant difference in this achievement level of the students under the activity centered approach and the conventional method. It is also noted that the activity centered approach helped in improving reading and writing skills.

Chawada (2005) conducted a study on developing essay writing skills in English for std. IX the major findings of the study were: (a) the technique of self brainstorming mind mapping and visual organizes were found to be effective in generating and organizing ideas while writing essays, and (b) The guidelines in the form of structuring the points with emphasis on introduction, body of the essay and conclusion were also helpful to the students in writing essays.

Panchal (2006) carried out a research ‘Evolving a Strategy for Enhancing Listening, Speaking and Comprehension English at Secondary Level’. The major objectives of the study were: (a) To involve a strategy for enhancing listening with comprehension (b) To find out the effectiveness of the study in terms of performance of the students through the strategy, the students’ opinion towards the strategy. The major findings of the study were (1) It was found out that improvement and enhancement took place in the students’ listening comprehensions. (2) The strategy was proved to be effective. (3) The teachers also expressed highly favourable opinions towards the evolved strategy for teaching listening comprehension to the students.

Kuldipsinh (2009) conducted a research to develop and implement an activity package to enhance the fluency in English Language at higher secondary level. He focused on arts students and his major findings were that an activity package was effective in enhancing fluency: it enhanced the vocabulary, pronunciation, grammar among the students. It also helped developing creativity among the students.

Tareq (2009) studied the effect of Task-Based Language Teaching (TBLT) on developing speaking skills among the Palestinian secondary level EFL students in Israel and their attitudes towards English. The objective of this study was to investigate the effect of a Task-Based Language Teaching program on developing the speaking skills of Palestinian secondary level EFL students and their attitudes towards English. The students were in the eleventh grade during a period of three months in which this study was conducted (January/March) of the academic year 2008/2009. The participants in the study are 91 eleventh grade students, 37 boys and 54 girls, from Bueina-Nujidat and Tamra High Schools. A Task-Based Language Teaching program was developed by the researcher for the experimental group. The following instruments were used in this study: A pre-test of speaking skills and post-test to measure the effect of the instructional program on developing the students’ oral social

interaction. A task-based program: The researcher designed an instructional program based on TBLT principles and procedures. An attitudinal questionnaire was consisted of four dimensions (developmental, instrumental, integrative and travel motivations).

Major findings of the study were: Firstly, the TBLT program enhanced significantly the speaking skill of the students of the experimental group and positively affected their attitudes towards English. Secondly, the TBLT program improved the girls' speaking skills more than the boys in the experimental group. Based on the results of the current study, it is recommended that EFL teachers should adopt the TBLT principles and procedures in their classroom practices. In addition, it is recommended that the English inspectors should set up in-service and pre-service training programs to develop the Palestinian EFL teachers' ability to use TBLT when designing and executing their lesson plans. Finally, the researcher recommended that curriculum designers should incorporate TBLT principles and procedures in the students' books and teachers' guide.

Zhang (2009) conducted a study on improving English language learners' oral and written language through collaborative discussions. Seventy-five students were taken from four fifth-grade classrooms from two mainstream classrooms and two transitional bilingual classrooms. A classroom from each pair of the mainstream and transitional bilingual classrooms was randomly assigned to implement collaborative reasoning discussions while the other two served as controls. After a four-week intervention, all students were assessed on storytelling, listening and reading comprehension, reflective essay writing, motivation, and English learning attitudes. Result showed that experiences of collaborative reasoning discussions accelerated English Language Learners oral and written English. The collaborative reasoning group performed significantly better than the control group on reading comprehension, on listening comprehension. Only the mainstream class students significantly benefited from collaborative reasoning discussions. The reflective essays written by the collaborative reasoning group were with greater length and vocabulary diversity, counterarguments and use of text as reference. The collaborative reasoning group discussions enhanced students' motivation and attitudes toward English learning.

Ravalji (2010) carried out a study focusing on the reading of students of 7th grade who were studying in GSEB schools. Her major findings were, that there was a significant change observed after the program for reading comprehension between the pre test and the post test means. She also found that students learn more if they are provided opportunity for peer discussion and interaction as well as creating a congenial environment of learning.

Patel (2011) conducted a study of achievement in English of standard IX students of Vadodara district. Main objectives were to study achievement of students of standard IX in English, to investigate the problems faced by teachers and students in English, to study the opinions about activities conducted for basic skills (LSRW), to identify common errors committed by the students in their writing in English and to study the achievement with respect to oral Communication. Following multistage sampling techniques, 1664 students were selected from thirty one schools of 9th Standard randomly from Vadodara district and teachers of the thirty one schools were taken as samples. Self-constructed achievement tests and questionnaire for teacher were prepared for collecting data. The data collected by Achievement test were calculated and analyzed with the help of Mean, Median, Standard Deviation and ANOVA. The data collected by questionnaire was analyzed and presented using frequencies and percentages. Major findings of the study were (a) only seven percent students could achieve more than sixty marks in the achievement test of English, (b) majority of teachers are not familiar with objectives of teaching English, (c) most of teachers found difficulties on the part of the students such as in question-answer, in reading, in composition, in pronunciations and in interest/aptitude of the students during teaching of English, (d) all the teachers replied there is a need to improve the level of English teaching at secondary level, (e) majority of the teachers (eighty seven and sixty eight percent respectively) opined that the students cannot speak and understand in the English language, (f) majority of the teachers (eighty four percent) suggested that the activities like more effort to speak in English; Listening - the English dialogues, news, stories; Writing - good essays, letter, dictation, composition; reading - books, magazine and stories can improve the level of English among the students, (g) majority of the students (seventy nine percent) committed errors in marking of punctuation, in writing spelling, in tense, in putting article, in putting article and in putting preposition, (i) achievement of high achievers were more in both oral as well

as in written test but in this comparison students with low achievement could not perform well in both oral and written test.

Jothi (2012) studied effectiveness of computer integrated method on the performance in English of upper primary students. Major objectives of the study was to develop a Flash based software package in English for Standard VI and to find out the significant difference, if any, in achievement scores in English of the Standard VI students between the control group, who learned through traditional method of teaching English and the experimental group, who learned through Computer Integrated Method of teaching English. Experimental design viz. the pre test post test equivalent groups design was employed for the study. 70 students were selected from Jesus Middle School, Vallioor of the sixth standard Tamil Medium School. Mean and SD, t- test, Correlated t-test, Analysis of Covariance, Pearson Product moment correlation were used for the analysis of the data. The study showed that there was significant difference between the Control and the Experimental groups in their achievement after giving treatment, with regard to the objectives namely Listening, Speaking, Reading and Writing. The mean scores showed that the post test scores of the Experimental group are higher than the Control group.

Agarwal (2013) carried out a study on development and try-out of teaching learning material on English for standard VIII students of Adarsh Nivasi schools for scheduled tribe in Gujarat. The main objectives were to study the effectiveness of the developed teaching learning material in terms of students' achievement in English and students' reaction. Quasi experimental research design pre-testing and post-testing was used for the study. Two Adarsh Nivasi schools for ST were selected as sample for the study purposively of standard VIII from Surat district. Self-constructed achievement test and three point Likert type reaction scale were prepared as tool for collecting data. The non-parametric Mann Whitney U-test and percentage and Intensity Index were used for analysis of data. Major finding of the study were the developed teaching learning material was found to be significantly effective in terms of enhancing students' achievement in English in comparison to the traditional approach and the developed teaching learning material to teach English was also found to be effective in terms of the reaction of students towards the package.

2.2.3 Review of Studies Related to Open Book Examination

Researcher came across 38 studies related to the Open Book Examination which are presented in abstract form as follow with its implications for the present study.

Krarp, Naeraa and Olsen (1974) studied on “Open-Book Tests in a University Course” in physiology. The study consists of 120 students of medical school divided into two groups with 60 students in each group. A multiple choice question tests with 60 items were administered in two groups. One group was allowed to appear the test with books but the other group did it without books. ANOVA was used to analyze the data. The major findings were as follows. (a) Analysis of variance confirmed that the difference between the two tests was significant with respect to the effect of books. Significance was demonstrable on recall level items only. (b) Majority of students in each group thought that access of books influenced positively their recall item performance, while a smaller number of students thought that they benefitted from the use of books on problem- solving items. (c) Most of the students mentioned that the test in which they had access to books was the more difficult one.

Pauker (1974) had made an attempt to study the academic performance of undergraduate students in Child Psychology course with an open book examination. With an equivalent control group design, the researcher administered an achievement test in child psychology on both control and experimental group. The findings of the study revealed that there was no significant difference in the mean achievement scores of control group and experimental group students when comparing open book test and closed book test.

Francis (1982) conducted a study comparing the effectiveness of an open book examination with traditional close book examination of English Literature. University graduate students were taken as sample for the study. A control group pre-test, post-test experiment design was followed in the study. Results of the study showed that the students of experimental group earned higher mean test scores than their control group students who completed a traditional close book examination.

Joseph (1983) conducted a study entitled ‘Evolving a strategy for teaching English grammar at high school level.’ Main objectives of the study were to develop a multimedia strategy for teaching English grammar at High School level and to find

out the effectiveness multimedia strategy for teaching English grammar. One school was selected purposively from Baroda city and 28 students were taken as sample of standard IX from Navrachana Higher Secondary School, Baroda. To measure the achievement of the student comprehensive test were prepared and to obtain the students' reaction, self constructed reaction scale was developed. Raven's Progressive Matrices was used for measuring the students' intelligence. Finding of the study showed that ninety per cent of the students scored 60 per cent or more marks in the in comprehensive test, both the students and the experts have expressed highly positive reaction towards the multimedia instructional strategy, significant positive correlation was found between intelligence of the students and their achievement through the develop multimedia strategy.

Richard (1985) conducted an experimental evaluation of the open book examination. Traditional closed book examinations were conducted on a University class of Hawaii students. The same achievement test was administered to another section of students studying the same course with the same instructor in an open book examination. Three directional hypotheses were tested at 0.05 level of significance. The hypothesis were (i) The open book examination will lead to fewer student errors; (2) The open book examination measures different abilities than the closed book examination; and (3) Student ratings of the help received from open book examination will not be related to examination scores. The first hypotheses i.e. 'The open book examination will lead to fewer student errors' was rejected and it was found that the average number of errors in both the groups were not significantly different. But the second and third hypotheses were retained. It showed that the open book examination was able to measure measured different abilities than the close book examination.

Feller (1994) stated that to change the present education system, the open-book examination is very important for educating our students to live in future. He argued that it is necessary to implement open-book examination for higher order thinking among our students in his article "Education for the Future", he stated that closed-book examination only demonstrates what students can do with whatever they have been able to memorize. In contrast to the traditional examination system, the open-book examination measures high-level skills, such as, conceptualizing, problem solving and reasoning corresponds to a total, real-life situation.

Theophilides and Dionysiou (1996) conducted surveys on graduate students to know the major functions and usefulness of the open-book examination through students' understanding and perception about the open book examination. The results revealed that students recognized the usefulness of the open book examination stating that open book examination helps the creative use of the knowledge they gained, helps in thorough course content mastery, helps student self-evaluation and feedback, helps in reduction of the examination stress and students' self-regulation habit in studying the course. But these students perceived that open book examination did not help them significantly to reduce their examination anxiety level and to boost their grades.

Loannidou (1997) conducted an experiment for comparing students' achievement in an open book examination and in a close book examination. The findings of the study revealed that there was no significant difference in total examination score between the students who had written an open book examination and those who had written closed-book examinations. From the findings of this study, the researcher suggested that other factors like the teaching learning process applied throughout the course may affect students' achievement. The researcher from this perspective concluded that, the open-book and closed-book examinations have their own advantages and disadvantages and it depends upon the situation, method of teaching and the content of study to decide whether to take an open book examination or a close book examination.

Brightwell, Daniel and Stewart (2004) carried out a study to examine whether an open book examinations can create an enriched environment for better understanding and responding to examination questions. They had gone on an experiment with a single group research design taking 196 medical students for a course unit of an introduction to Anatomy and Physiology. A test was first undertaken by students in their class time with 50 multiple-choice questions either reviewing concepts or requiring critical thinking and clinical applications. The test was again administered online where students can refer their texts. From the findings of the study, it was concluded that a suitably constructed set of questions could be used to discriminate student abilities in either an open or closed book environment.

Phillips (2006) conducted a study on Open-Book Tests to Strengthen the Study Skills of Community-College Biology Students. The study involved 1,080 community-

college students who were identified as completers in General Biology classes. The study was extended from 1994 to 2004. The data were analyzed using paired-sample and independent-sample t- tests. The data for the entire sample were analyzed using a paired-sample t-test to determine if there was a significant difference between the mean score of the initial open-book test and the final open-book test. The study showed a dramatic improvement in the students who were designated as having weak study skills when they were compared with the improvement of the entire sample. But open-book tests are not successful in improving the study skills of students who already have strong reading abilities, they do provide an opportunity for students to use their study skills.

Agarwal et al. (2007) conducted two experiments to study the testing effect with open-book tests and close book tests. In the open book tests, students were allowed to view their notes and textbooks while taking the test, and in the closed-book tests students attempted the test without viewing their notes or textbooks. Experimental and controlled group designs were followed. Sample subjects studied prose passages and then restudied. The experimental group appeared an open book test and a delayed open book tests with and without feedback. The controlled group appeared at a close book test and a delayed close book tests with and without feedback. The findings of the studies revealed that Open-book testing led to better initial performance than closed-book testing. Both types of testing produced equivalent retention on a delayed test. Taking either kind of test, with feedback, enhanced long-term retention, relative to conditions in which subjects restudied material or took a test without feedback.

Kruger (2008) conducted a study entitled “An evaluation of open-book examinations used in the training of professional accountants”. The objectives of the study were divided into general and specific objectives. General objective of the research was to gain a better understanding of how Open Book Assessment (OBA) has affected the learning and teaching environment in the training of professional accountants. The specific objectives of the research were, (1) to perform a literature study of recent research done on OBA, (2) to assess the usefulness of OBA with specific reference to whether students and lecturers are of the opinion that SAICA and the IRBA have succeeded in reaching their objectives with the implementation of open-book assessment, (3) to compare the view of lecturers and students on whether lecturers changed their approach to teaching compared to when assessment was done by means

of a closed-book examination, (4) to gain an understanding of the effects the open-book examination system had on the study behaviour of students, (5) to gain an understanding of the effects the open-book examination system had on the behaviour of students when writing examinations, (6) to get the opinion of students and lecturers on when students should be exposed to open-book assessment, 7) to determine what is the best format (closed book, partially open book, fully open book of any material) for the examination, (8) to determine how the fact that allowed texts are only available in English affected students who receive tuition in Afrikaans and (9) to make recommendations as to how teaching and assessment should be approached in an OBA environment. The sample of the study consisted of 1490 students, enrolled at the different universities. A questionnaire was used as a tool for data collection. The statistics used for analysis were frequency and percentage analysis, ranking of preferences based on the level of agreement on statements. The major findings were as follows. (i) OBA was a move in the right direction to bring theory closer to practice in the training of professional accountants. The negative study behaviour typically encountered in an OBA environment seemed to be overestimated and can be reduced with earlier exposure and following the right teaching strategies. (ii) It seemed that OBA had changed the learning behaviour of most of the students to a deeper approach. Lecturers however felt that the general learning approach of students had suffered. In many instances, little changes had taken place in the way lecturers taught in the open-book assessment environment. (iii) Most of the students and lecturers agreed that OBA caused a reduction in their anxiety levels. (iv) traditionally CTA tests and examinations assessed higher-order thinking skills of students, also when they were assessed using a closed-book format. It seems that OBA in general led to lecturers moving even further away from testing lower-order learning. (v) There was a strong argument for introducing OBA earlier, which was well supported by students and lecturers.

Rajput (2008) went on a survey type of study to know the opinions of teachers about Open Book Examinations with an objective to know the opinions of secondary school teachers about OBE with respect to some variables. Teachers of 10 secondary schools of Patan Taluka were taken randomly as sample for the study. Survey method was used with an opinionnaire as the tool for data collection. Major findings revealed that there were difference of opinions among teachers about OBE with respect to locality

and gender. In terms of locality it was found that teachers from city areas were more inclined toward OBE. In terms of gender it was found that female teachers are more positive than male teachers towards OBE.

Vaghrodia (2008) conducted a study with the objectives to know the opinions of teachers, students and guardians towards probable effects of an Open Book Examination. Teachers, students and guardians of 20 schools were selected from Ahmedabad City as the sample for the study with the help of stratified random sampling technique. An opinionnaire was used for data collection. Data analysis was done with the help of frequency and percentage response. Major Findings revealed that a large majority of the teachers were familiar with the structure of OBE and were not interested to apply OBE. They suggested a complete changes into Text book, Question paper and evaluation system to implement OBE. 54 percent of students were not interested for the OBE because of work hard. Nearly 63 percent of guardians were not in favour of OBE system. 73 percent of guardians believe that OBE will reduce the practice of tuition classes for their child.

Chaudhari (2009) did a survey to study the opinions of secondary school teachers about OBE. Teachers from four schools of Patan Taluka selected randomly constituted as the sample for the study. An Opinionnaire was used for data collection. Findings of the study revealed that most of the teachers were in favour of OBE, and most of the teachers believe that copying during examination will be reduced by adopting an OBE.

Patel (2009) conducted a study entitled “ A study for new planning an application of standard IX students about OBE” with the following objectives (1) to check the effect of OBE, (2) to construct a question paper for both traditional method and OBE, and (3) to compare between traditional method and OBE with reference to educational achievement of students. 43 teachers and 100 students of 3 schools were selected randomly from Gandhinagar district as the sample of the study. An achievement test and an opinionnaire were used for data collection. Findings of the study revealed that (1) students have insufficient time to complete the paper by OBE system when students can write their paper completely by using traditional method and (2) in case of OBE, student from urban area shown good performance compare to their rural counterpart.

Thakar (2009) conducted a survey to know the views of Primary, Secondary and Higher Secondary teachers about OBE with the help of a questionnaire. A total of 50 teachers of primary, secondary and Higher Secondary schools were selected randomly as the sample for the study from Mehsana district of Gujarat. Findings of the said study revealed that 50 percent of teachers were in favour of OBE, and 30 percent of the teachers were ready to change the traditional teaching learning process if OBE is implemented in the schools.

Vyas and Vyas (2009) did an experiment on the first year trainees of P.T.C. College to compare Open Book Examination and Close Book Examination in terms of examination anxiety and achievement. 76 first year trainees from one P.T.C. college of Himatnagar city of Gujarat were taken as sample purposively. Trainees were divided into two groups one for open book examination and another for traditional close book examination. An Achievement Test on the subject Evaluation and Measurement and an examination anxiety test were constructed by the researchers and used for data collection. T-test was used to analyse data. Major Findings were that, there was no significant difference in the mean achievement of students those appeared in the open book examination and those appeared in the close book examination and the closed book examination pattern showed significantly higher examination anxiety on the trainees in comparison to the trainees those attempted an open book exam pattern.

Siddik (2010) conducted a survey to study the opinion of secondary school teachers about open Book Examination with respect to their gender, experience, stream and type of school. Teachers of 30 secondary schools of Ahmedabad district selected by stratified Random sampling method constituted as the sample of the study. An opinionnaire was prepared by the researcher and used for data collection. Major findings of the study revealed that most of the teachers have positive opinions towards OBE; no major difference in opinion towards OBE was observed among teachers with respect to their sex, experience of teachers, and type of schools; science teachers had more positive opinion than Arts teachers towards OBE.

Agarwal and Roediger (2011) conducted an experimental study entitled “Expectancy of an Open-Book Test Decreases Performance on a Delayed Closed-Book Test”. The objectives of the study were (i) to know whether test expectancy

instructions before studying would influence final retention after two days on delayed fact, comprehension, and transfer tests, ii) to know how students would study following non-specific expectancy instructions, (iii) to know how students' self-selected encoding/study strategies would influence final retention after two days. The sample of the experiment 1 consist of a total of 108 subjects and experiment 2 consist of total 72 participants were selected from the Department of Psychology human subject pool. Using GRE materials specifically test was designed for open-book testing. Participants studied passages and then took initial open book or closed-book tests. Data were analyzed by using t-test and one-way ANOVA. The major findings were as follows. (i) Experiment 1 obtained significant testing effects following both open-book tests and closed-book tests with feedback. (ii) In Experiment 2 the main finding was that participants studied for less time when expecting an open- book test and correspondingly performed worse on later retention tests. Expecting an open-book test (relative to a closed-book test) led to worse performance on all three types of items on the delayed criterion test. (iii) In other words, students' expectations of a final closed- book test enhanced delayed transfer performance, even when an initial test was not completed. This demonstrated the robust effect of test expectancy on later performance. (iv) The result also showed that non-specific and closed-book test expectancy instructions increased students' study time and subsequently enhanced delayed test performance. Although initial retrieval practice during a closed-book test had no different effect from practice on an open-book test, the expectation of a final closed-book test seemed to be a more potent factor influencing long-term learning.

Biswal and Das (2011) had conducted a study to achieve the objectives viz. (i) To compare the achievement of students of MBA in close book evaluation system and open book evaluation system, (ii) To study the attendance of students in the classes over a period of time during close book evaluation system and open book evaluation system, (iii) To study the participation of students in the classes during close book evaluation system and open book evaluation system, (iv) To study the pattern of answers by the students during close book evaluation system and open book evaluation system, and (v) To study the reaction of students about the open book evaluation system. 301 MBA students of three years Evening Programme of Faculty of Management Studies, MSU from the year 2000 to 2009 those studied Research Methodology in Management (RMM) were chosen purposively as the sample of the

study. Open book evaluation system designed by the researchers consists of (1) open book instructional environment and (2) open book examination. Following findings were revealed by the study. Mean achievement of the students in RMM exposed to Open Book Evaluation System was quite similar to the Mean achievement of the students in RMM taught in a traditional close book Evaluation System. Mean attendance of the students in the Open Book Evaluation System was significantly more than the mean attendance of students in a close book environment. Participation of students in class room discussion increased significantly those were exposed to Open Book Evaluation System. Use of different types of reference materials like, magazines, news papers, internet, books of different authors etc. have been significantly increased by the students exposed to Open Book Evaluation System. Students those exposed to open book evaluation were found more satisfied with their answers. Understanding of students about the content increased what was exposed to open book evaluation. In terms of the reaction of the students those were exposed to Open Book Evaluation System, it was found to be overall positive and satisfactory.

Gupta (2011) conducted a study entitled “A Comparative Study of Achievement of B.Ed. Students Examined through OBE and CBE with Reference to Certain Objectives”. The study had the following objectives, To Study the Overall Achievement of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam; To Compare the “Comprehension Ability” of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam; To Compare the “Application Ability” of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam; To Compare the “Analyzing Ability” of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam; To Compare the “Synthesizing Ability” of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam; To Study the Achievement of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam With Respect to Gender i.e., Male and Female; and To Study the Achievement of B.Ed. Students Examined Through Open Book Exam and Closed Book Exam With Respect to Their Entry Qualification i.e., Graduate and Post Graduate. The sample comprising of 78 and 80 students respectively from Two English Medium B.Ed. Colleges are selected purposively, one for closed book examination and another for open book examination. Four Achievement tests were held one for each core compulsory course of B.Ed. programme for data collection.

Major findings of the study revealed that; OBE students scored higher than CBE students in terms of their overall academic achievement; In all the three categories i.e. Above Average, Average and Below Average students, OBE students scored higher than CBE students in all the levels like, comprehension, application, analysis and synthesis level; Gender did not have any impact on overall achievement in OBE Environment; and Entry qualification (qualification at the time of admission in B.Ed. i.e. graduation and post graduation) did not affect the Academic achievement of students in OBE.

Mekala (2011) conducted a qualitative research entitled “Open Book Examination a Paradigm Shift”. For the study, a survey was conducted by administering a structured questionnaire to students of National Institute of Technology (NIT), Trichy. The data was collected from a random sample of 75 students. The questionnaire aimed at eliciting responses regarding their attitude towards open book examination. The data were analysed qualitatively. The major finding of the study on open book examination provided an insights into learner's perspective of their assessment procedures. The objective of an examination is to make the learner comprehend, analyse, relate and present facts coherently. This survey made it evident that OBE holds good for the tertiary level engineering students, having fulfilled the requirements of an assessment tool and a learner-centered approach to education.

Ranjan (2011) conducted a survey with the objective of observing the reaction of B.Ed. students towards the open book examination. 84 B.Ed. trainees of the year 2010-11 of Waymade College of Education were selected purposively as the sample for the study. Open book examination was conducted on the sample and their reaction towards the OBE was collected through a reaction scale. Data were analyzed with the help of frequency, percentage and content analysis. The major findings revealed that a large majority of the trainees have favorable reaction towards OBE. Trainees opined that OBE is quite helpful to them, especially in developing higher order thinking skills, gaining in-depth understanding and broadening their perspectives of applications.

Rekha Kumari (2011) had gone through and survey to studied the opinions of school teachers towards open book examination with respect to gender, stream in which they are working and level (secondary and higher secondary) at which they are working.

All the teachers from 30 secondary and higher secondary schools of Ahmedabad city were selected as the sample with the help of stratified Random sampling. An opinionnaire was constructed by the researcher and used for data collection. Major findings revealed that most of the teachers irrespective of their gender, stream in which they are working and level at which they are working, had positive opinion towards open book examination.

Therriault, et. al. (2011) conducted a study entitled “Open-book problem-solving in engineering: An exploratory study”. The sample of the study consisted of 8 (there were a total of 40 in the program) senior materials science and engineering students at a large public university in the south-Eastern US. The data were analysed by the use of median and correlation. The major findings of the study were as follows. (i) Results indicate that reading or searching the textbook consumed the largest portion of participants’ problem solving time and was always negatively associated with their performance. (ii) In comparison to the low-performing participants, examples from high-performing participants often illustrated purposeful uses of the text book. These students had a plan regarding what to search for and how to access the book effectively. (iii) Results showed that students performance could be hindered by an overreliance upon the textbook (e.g., reading large portions of the text verbatim during an examination or hunting through the book for a perfect example problem) and that this may lead to ineffective time management. (iv) Results highlighted the importance of training students in effective means of using resources during open-book examinations so as to avoid distractive behaviours. This training would serve not only to improve examination performance, but to educate students in effective use of resources for professional practice where open-book problem solving was the norm.

Unnikrishnan (2011) conducted a comparative study to measure test anxiety of students examined through closed book examination and open book examination”, with respect to some variables. 128 B.Ed. trainees of the year 2010-11 from two B.Ed. colleges of Gujarat were taken purposively and constituted as the sample for the study. Test anxiety scale by V.P. Sharma was used to collect data from the sample. The findings of the study revealed that test anxiety is not sensitive to mode of examination (open book examination or close book examination), gender of the

trainees (male and female) when examined through open book examination as well as close book examination.

Block (2012) conducted a study entitled “A Discussion of the Effect of Open-Book and Closed-Book Examinations on Student Achievement in an Introductory Statistics Course”. The sample of the study consists of 260 students of each semester. The data were analyzed by using mean and probability. The major findings showed that the students liked open-book examinations unless they thought the examinations were “harder.” The end of course critiques showed that the changes to the course’s examination policy over the last three semesters had a final net effect of increasing student satisfaction with the course. The final examinations scores did not decrease with the policy changes, and instructors reported better-prepared students. When students were told the examinations were closed-book they came to the test better prepared. In fact, the instructors noticed the students spent much more time formulating and writing their answers on the closed-book final examinations compared to the open-book examinations when the students were searching for answers in the book. Closed-book examinations that allowed handwritten note cards were associated with, and may be partly responsible for, increased student preparation and enjoyment of the course. The note cards were used, but not as extensively as the book had been during open-book examinations.

Gharib, Phillips and Mathew (2012) conducted a study entitled “Cheat Sheet or Open-Book? A Comparison of the Effects of Examination Types on Performance, Retention, and Anxiety”. The objectives of the study were (i) to compared the effectiveness of different examination types (open-book, closed-book, and cheat sheet) in different types of classes, (ii) to measure the effectiveness of the examination by comparing examination scores, asking students about their preferences, measuring long-term retention of material on quizzes several weeks after the examination, and measuring anxiety levels immediately before the examination and (iii) to know the examination anxiety during examination. The sample of the study was a total of 396 undergraduate students enrolled at a small Liberal Arts University. There were 297 (64 males and 233 females) students enrolled in eight different sections of Introductory Psychology, and 99 (12 males and 87 females) participants enrolled in four sections of Statistics. Paired-samples t-tests and ANOVA were used to analyze

the data. The major findings were as follows. (i) The study revealed that closed-book examinations resulted in lower scores than either open-book examinations or cheat sheet examinations and cheat sheet examinations resulted in lower scores than open-book examinations. (ii) It was found that the quality of the cheat sheet was not related to scores on cheat sheet examinations in Introductory Psychology, but there was a positive correlation between cheat sheet quality and cheat sheet examination score in Statistics. (iii) The test anxiety measured right before the examination was negatively correlated with scores on the examination. A paired-samples t-test finds higher anxiety scores during cheat sheet examination compared to open-book examination in both Introductory Psychology and Statistics. (iv) The students in both classes predicted that they would do better on open-book or cheat sheet examinations compared to closed-book examinations. (v) Finally, students in both classes preferred better in open-book and cheat sheet examinations over closed-book test.

Sharma (2012) conducted a study entitled “An Investigation into the Effectiveness of Open Book Examination and Traditional Examination Method in Secondary Schools”. The main objectives of the study were to develop a teaching Program in Sanskrit subject for the students of standard IX, to frame a post test on the selected unit for the selected class, to compare the result obtained by the students in the open book examination and traditional examination method, to find the more effective examination method on the basis of the achievement in the post test, to find the behavioral significance and behavioral effectiveness of the research study. The study was carried out through randomized two groups post-test true experimental design. Examination methods having two levels viz. open book examination and traditional examination method were taken as the independent variables and achievement was the dependent variable. The study was carried out on the sample of sixty seven students. Achievement test was developed as a tool to measure achievement. The major findings of the study were as follows. (i) The achievement of the students was found to be higher with the open book examination in the post test. (ii) The achievement the students in the objective question was found to be higher with the open book examination in the post test. (iii) The achievement the students in the short question were found to be equal in open book examination and traditional examination in the post test. (iv) Open book examination was found to be behaviourally effective and significant.

Youssef and Ryan (2012) conducted a study entitled “Relationship between Examination Format and Learning Effectiveness” The objective of the study was to evaluate the influence of examination-format on the learning effectiveness from outcomes of the midterm and final examinations of selected freshman and junior engineering classes. The total number of students participating in the freshman course was 106, while the junior level course had 56 students. For consistency in evaluation, the same instructor graded the common problems for all the courses. A common question was administered to all students during the final examination only. The findings of this study suggested that examination format affects the study habits and examination outcome, was supported by the results from both classes (a freshman level class and a junior level class).

Karagiannopoulou and Milienos (2013) conducted a study on exploring the relationship between experienced students’ preference for open book examination and closed book examination, approaches to learning and achievement. The sample of the study consisted of 144 undergraduate (56 third- and 88 fourth-year) students attending a Philosophy, Education and Psychology Department. Examination preferences for open-book examination or closed-book examinations were assessed by 3 self-report questions. The major findings of the study were as follows. (i) Students who preferred the open-book examination scored lower on “Time management”, “Achievement”, and “Unrelated memorizing”. (ii) The study provided links between the students' study profiles, assessment preference, and achievement. (iii) The deep profile students (mainly 3rd-year students) seem to prefer the open-book examination but appeared unorganized in their study in a similar extent to surface-profile students. They also reported low achievement. (iv) The study cautiously suggests the influence of the year of study on students' assessment preference.

Gamit (2013) did a research study on status of awareness and preparedness of CBSE schools in Vadodara city about the Open Book Examination. The major objectives of the study were (i) to study the awareness of the teachers of CBSE schools in Vadodara City about Open Book Examination, (ii) to study the perception of the teachers of CBSE schools in Vadodara City about Open Book Examination, and (iii) to study the preparedness of the principals of CBSE schools about Open Book Examination. The study was survey type in nature. Random sampling method was

used to choose the sample for the study. 10 CBSE affiliated schools of Vadodara city were selected randomly using lottery method. All the teachers and principals of those schools were constituted as the sample of the study. Data were collected with the help of a questionnaire , a perception scale and a semi structured interview schedule. Collected data were analysed using frequency, percentage and Intensity Index. From the analysis of the data gathered, the major findings which emerged were as follows. (1) An average number of teachers were aware about the fundamentals of open book examination, and the difference between open book examination and closed book examination. Some of the teachers were aware about the questions that were to be asked in OBE, and most of the teachers were aware about the nature of teaching and learning needed for an open book test and the environment that had to be created for the OBE.(2) The overall perception of the teachers towards the open book examination was favourable. So it can be observed that teachers regarded the open book examination in a positive manner considering that it would be implemented in future. (3) Most of the Principals were aware that the CBSE was planning to introduce Open Book Examination in standard X and XII during the academic session 2013-14.

Zulfia (2013) did a study entitled ‘A study on the open book examination in terms of the achievement and anxiety of standard VIII students’. The objectives of the study were (i) to study the impact of the open book examination in terms of the achievement of standard VIII students in different subjects i.e. English, Science, S.S., Mathematics, Hindi, and Gujarati and (ii) to study the impact of the open book examination on the level of examination anxiety on standard VIII students. Sample was selected purposively. One of the Grant-in-aid schools of Vadodara city was chosen that followed Gujarat Secondary and Higher Secondary Education Board (GSHSEB) syllabus. Data was analyzed both qualitatively and quantitatively. To know the answers of the students in achievement tests, content analysis was done. To test the hypothesis, data was analyzed with the help of non-parametric Mann Whitney U-test. Following major findings were found from the study. (i) No significant difference was found in the mean achievement of standard VIII students in their close book examination and open book examination for the subjects of English, Social Science, Mathematics, Hindi, Gujarati and in overall achievement. (ii) Significant difference was found in the mean achievement of standard VIII students in their close book examination and open book examination for the subjects of Science, where the mean

science achievement score of open book examination was found significantly greater than their mean science achievement score in close book examination. (iii) No significant difference was found between the mean examination anxiety level of students those appeared in the close book examination and open book examination.

Chatterjee (2014) conducted a study on teaching economics to standard XI students for open book examination. The main objectives of the study were (i) to develop a strategy to teach Economics to standard XI students for open book examination, (ii) to teach Economics to standard XI students with the help of the developed strategy for open book examination and (iii) to study the effectiveness of the developed strategy for teaching economics to standard XI students for open book examination. Quasi Experimental design was used in the study. The pre-test post-test non-equivalent group design was followed. Two schools with commerce stream were selected purposively for sample. Mean, Standard Deviation, Standard Error of Mean and Mann-Whitney U-test was used to analyze the quantitative data collected through post-tests. Following were the major findings of the study. (1) The significant difference was found in the mean achievement scores of the standard XI students of experimental group and the control group. The students taught economics through the developed strategy for open book examination scored more than the control group. (2) The developed strategy included content presentation through power-point, collaborative learning activities with cognitive questions, cross group sharing and deliberations, putting knowledge into action, concept mapping for the standard XI students of experimental group helped in enhancing their achievement of the scores in comparison with the students of control group.

Jalal, Fadhil and Hasini (2014) conducted an experimental study entitled “Students, Assessment through Open-Book Concept for Final Examination”. The sample of the study consists of 84 students from 3 sections. The equation for factor of safety (FS) and von- mises stress (σ_{vm}) were used for data analysis. The major findings were as follow. (i) The students with lower mark were not well prepared in strategizing the answering technique. They were prone to distraction by similar solution in the text, required more time for reading and possibly took the simplest route by replicating the exact solution from the text without any critical interpretation. (ii) The results of the open-book assessment were depressing. The students were more confident and

performed better in close-book compared to open-book conditions. (iii) The students with lower marks were unable to systematically answer the question and applied wrong equations or tried to imitate the example in textbook even though not relevant to the question at all. (iv) Based on student performance, the result show that the students behaved differently to the close- book examination and open-book examination. They performed better in traditional assessment compared to open-book alternative. Possibly, the students were not well prepared for open-book concept, did less preparation and had false confidence as they assumed that all answers, techniques and methods were provided in text books. (v) The finding indicated that student performance negatively associated with their reliance upon the textbook. (vi) The students can only do well in the open book assessment if they are well prepared and have a deep understanding on the current and prerequisite subjects.

Biswal (2015) conducted a study on open book examination system for secondary school students in different teaching learning environments. Two English Medium schools under Gujarat Secondary and Higher Secondary Education Board were selected purposively as samples from Vadodara City during the academic year 2013-14. Objectives of the study were (a) to design an open book environment for standard VIII students for all subjects; (b) to implement the designed open book environment for standard VIII students in all subjects; (c) to study the effectiveness of the open book testing in a traditional close book environment. (d) to study the effectiveness of the open book testing in an open book environment (e) to study the effectiveness of the open book environment in a close book testing (f) to study the effectiveness of the open book environment in an open book testing (g) to study the effectiveness of the open book environment in terms of the reaction of students. Data were collected through achievement tests and were analyzed by Mean, Standard Deviation, Standard Error of Mean and Mann-Whitney U-test. Data collected through reaction scale was analysed quantitatively with the help of percentage and Intensity Index. Major findings of the study were (a) in a traditional environment the result of close book testing and open book testing were found similar in most of the subjects; (b) in an open book environment the result of close book testing and open book testing were found similar in most of the subjects; (c) in an open book testing, open book environment was found significantly better than traditional environment in enhancing scores in 23 components out of a total of 32 components of all the subjects; (d) in a

close book testing, open book environment was found significantly better than traditional environment in enhancing scores in 22 components out of a total of 32 components of all the subjects; (d) both open book environment and open book testing were found effective in terms of the reaction of students; (e) open book environment helped students to write answers in a better way in both open book testing and close book testing with divergent ideas, content knowledge and sound logic along with the comprehension of the subjects. It also helped students to score better in their overall achievement.

Das (2015) conducted a study on the open book examination system at secondary school. Objectives of the study were (a) to design and development of an open book examination system for standard VIII students; (b) to implement the developed an open book examination system on standard VIII students; (c) to study the effectiveness of the developed open book examination system implemented on standard VIII students in terms of the content knowledge, logic, divergent thinking, comprehension and achievement of students; (d) to study the effectiveness of the developed open book examination system implemented on standard VIII students in terms of the reaction of students and teachers. Two English medium secondary schools, both affiliated to Central Board of Secondary Education were selected from Navsari in the academic year 2013-2014. Sample of the study was taken purposively, quasi-experimental design was used. The collected data obtained through achievement tests were analyzed by employing quantitative data analysis techniques. Mean, Standard Deviation, Standard Error of Mean and Mann-Whitney U-test were used to analyze the quantitative data collected during semester I semester II. Data collected through reaction scale was analysed quantitatively with the help of percentage and Intensity Index. The major findings of the study were (a) open book examination system was found significantly effective in comparison to traditional examination system in enhancing scores in most of the subjects; (b) students showed their positively agreed response in most of the components related to open book environment and open book testing separately and as a whole; (c) teachers also showed their positively response in most of the components related to open book environment and open book testing and as a whole.

2.3.0 IMPLICATION OF THE REVIEW OF RELATED LITERATURE FOR THE PRESENT STUDY

The researches reviewed related to critical thinking in classroom teaching learning showed that special programmes and strategies developed by Meghani (1999), Paily (1999), Kaur (2009), Patel (2011), Deepa (2012), Seeja (2012), Caldas (2013) and Singh (2014) were found to be effective in enhancing critical thinking ability among the students. Studies related to divergent thinking showed that special programmes and strategies developed by Lee (2004) and Laila (2006) were found to be effective in enhancing divergent thinking ability among the students. The researches reviewed related to English language teaching showed that special programmes, strategies developed by Dewal (1974), Charles (1981), Joseph (1983), Kapadia (1988), Jayashree (1989) Sharma (1985), Salvi (1991), Rajendran (1992), Chawada (2005), Panchal (2006), Kuldipsinh (2009), Tareq (2009), Zhang (2009), Ravalji (2010), Jothi (2012) and Agarwal (2013) were found to be effective in enhancing skills and achievement in English. It may be due to the facts that attempt could be taken to consider the drawbacks of the traditional system of teaching learning English and specific care could be taken in the special programmes or strategy to enhance the teaching of English. Patel (2011) tried to find out the achievement level in English and the difficulties students and teachers faced in the classroom. In the similar way attempts will be made in the present study to develop an environment to enhance teaching learning of English focusing on the LSRW skills. From the related literature on open book examination (OBE), Pauker (1974), Francis (1982), Joseph (1983), Richard (1985), Feller (1994), Theophilides and Dionysiou (1996), Brightwell, Daniel and Stewart (2004), Phillips (2006) Ioannidou (1997), Kruger (2008), Therriault, Lee, Douglas, Koro-Ljungberg and McNeill (2011), Gharib, Phillips and Mathew (2012), were foreign studies. Studies conducted by Agarwal et al. (2007), Rajput (2008), Vaghrodia (2008), Chaudhari (2009), Patel (2009) Siddik (2009), Thakar (2009), Vyas and Vyas (2009), Siddik (2010), Biswal and Das (2011) Gupta (2011), Ranjan (2011), Rekha Kumari (2011), Unnikrishnan (2011), Sharma (2012), Gamit (2013), Zulfia (2013), Chatterjee (2014), Biswal (2015) and Das (2015) were Indian studies. Studies by Pauker (1974), Francis (1982), Richard (1985), Ioannidou (1997), Agarwal et al. (2007), Vyas and Vyas (2009), Biswal and Das (2011), Gupta (2011), Ranjan (2011), Rekha Kumari (2011), Unnikrishnan (2011), Sharma (2012), Zulfia (2013)

Biswal (2015) Das (2015) and Chatterjee (2014) were experimental in nature where the effectiveness of Open Book Examination was measured. Studies by Theophilides and Dionysiou (1996), Brightwell, Daniel and Stewart (2004), Vyas and Vyas (2009), showed that OBE is better than CBE in decreasing examination anxiety.

In all the experimental studies related to open book examination except Biswal and Das (2011), and Gupta (2011), OBE is considered only in the context of students evaluation and no studies have taken care to design an environment to prepare students for the OBE for which in the studies conducted by Pauker (1974), Ioannidou (1997), and Brightwell, Daniel and Stewart (2004), Zulfia (2013) could not show any effect of OBE. Studies conducted by Theophilides and Dionysiou (1996), Rajput (2008), Vaghrodi (2008), Chaudhari (2009), Thakar (2009), Siddik (2010), Rekha Kumari (2011), Unikrishnan (2011) and Gamit (2013) were based on the opinion or attitude of teachers, parents about OBE. Most of the studies revealed a positive attitude of teachers and parents towards open book examination. Some studies were found where effects on teaching had a direct impact on the result of Open book examination included in the studies conducted by Ioannidou (1997) and Chatterjee (2014). These studies realized that students need to be specifically prepared for open book examination and teaching strategies need to be adopted. Some studies took place where the whole teaching approach was changed to adjust to the open-book assessment environment. Study by Francis (1982) found that Questions were adapted to test higher-order learning.

From the researches in the area of open book examination, a large number of studies were found on the perception of teachers about the open book examination. The experimental studies on open book examination reviewed showed that open book examination is considered only in the context of student's evaluation i.e. a tool for testing product and nobody talks about the required environment that can prepare students for open book examination. In the present study an attempt is made to compare open book examination with close book examination. It is also attempted in the present study to prepare an open book environment that can prepare students for open book examination to do better in different dimensions in language learning. Further in the study, environment for open book examination was considered as a tool for the betterment of process as well as product related to teaching learning. The researches of Panchal (2006), Kuldipsinh (2009), Chawada (2005) and Rajendran

(1992) showed that well designed strategy can develop language fluency, imagination, critical thinking and creativity. Attempt is also made to consider open book environment as a strategy to enhance LSRW skills, logic and creativity among students and that could be reflected from the answers of the students. It could be concluded that OBE could develop higher order thinking among students and needs an appropriate environment. Even no study was reported in the OBE relating to teaching of English language where it is very essential to have an open book environment to develop LSRW skills optimally. Hence, the present study is a genuine and honest attempt in this direction to create an open book environment to teach English and to examine the viability of OBE in different teaching learning environments like, open book environment and close book environment.