

CHAPTER-3

REVIEW OF RELATED LITERATURE

3.1 Introduction

A literature review is the effective evaluation of selected documents on a research topic. A review may form an essential part of the research process or may constitute a research project in itself. The literature review is a critical synthesis of previous researches. The evaluation of the literature leads logically to the research question. The literature review provides a background to the study being proposed. The background may consider one or more aspects. The aim is to extract key points by comparing and contrasting across studies, instead of reading one paper after another.

According to Borge (1964)

“The related Literature in any field forms the foundation upon which all future work will be built”.

According to Mauli (1964)

“The review of the reference Literature is essential to the development of the problem and to the derivation of the effective approach to its solution”.

The review needs to sum up the main findings of the research into the literature. The findings can be related to the aims of the study one is proposing to do. The present chapter deals with the review of the research studies which were reviewed by the researcher and have been presented below-

3.2 Review of Related Studies

Following studies conducted in the field of Computer Assisted Learning have been reviewed which are presented below-

Gohil, Mahipal.D. (2011) conducted study on “Development and Implementation of Computer Assisted Learning Package in Teaching English at Standard-9”. The objectives of study were-

1. To develop and implement CAL package for Teaching English Language at standard-9.
2. To study the effectiveness of the package in terms of the achievement of students.
3. To study the reactions of Students towards the developed CAL package.
4. To study the reactions of Teachers towards the developed CAL package.

Convenient sampling technique was adopted for selection of the sample. One school viz. Shree Rang Navchetan Vidhyamandir, Valiya was selected as the sample institution for the purpose of the present study.

Major findings of the study were that-

- The significant difference exists in mean achievement score of Control Group and Experimental Group students.
- Most of the students and teacher were found to have positive reactions towards the CAL package. Teacher welcomed the media integrated approach towards students-center learning.
- The result showed that the Computer Assisted Learning method was more effective than the Conventional Method for the selected poems of the std-9.
- The CAL package decreased teacher domination of discussions in classroom.

Padmini, M.S., Sonawane, S.A., Uplane, M.M. (2011) Conducted study on “CAI: An Effective Instructional Method for Secondary School Low Achievers”. The objectives of the study were-

1. To identify low achievers in Physics.
2. To develop textbook-based computer multimedia software package.
3. To test the effectiveness of the developed software package for enhancing the academic achievement of low achievers in physics.

The samples for the present study were all the low achievers in Physics of VIII students of city English Medium schools at Pune.

The findings of the study were-

- Learning through computer multimedia software package is more effective as compared to traditional method.
- Students learn better with their own pace, speed and interest.
- As the software is based on psychological principles, due to self-motivation, students get much success and interest in learning.
- Due to practice, there is perfection in the subject.

Patel, R. (2009) undertook a study on “Construction of CAL program, its implementation and effectiveness in English”. The objectives of study were-

1. To develop Computer Assisted Learning program in English Language Teaching for standard-IX students.
2. To implement Computer Assisted Learning program in English Language teaching for standard –IX students.
3. To study the effectiveness of the CAL program in Teaching English Language in terms of achievement of standard-IX students.
 - a) A comparative study of CAL program and traditional method.
 - b) To find out the effectiveness of the CAL program on the experimental group students achievement.
 - c) To find out the effectiveness of the educational achievement of both group (experimental group, and controlled group) of students by taking evaluation test.

The samples for the present study were 68 students of standard-IX of Vakharia P.J.High School, Kalol.

Major findings of the study were that-

- The result showed that the Computer assisted Learning method was more effective than the conventional method for the selected topics of std IX.

- It can be said that the effectiveness of the CAL program is increasingly equivalent on Experimental group boys and girls.
- The findings also showed that the students of experimental group had shown higher achievement than the students of controlled group. So the effectiveness of CAL was higher as compared to the conventional method.

Chaudhary, M. (2007) conducted a comparative study of programmed learning and Computer Assisted Learning on ‘Direct-Indirect speech std-9th in English. The objectives of the study were-

1. To construct programmed learning and Computer Assisted Learning for the students of std-9th on ‘Direct-Indirect speech’ in English Grammar.
2. To try-out programmed Learning for the students of std.9th on ‘Direct-Indirect speech’ in English Grammar.
3. To compare learning by Programmed Learning, Computer Assisted Learning and conventional Method.

The investigator had taken the sample of the students of std 9th studying in Gujarati medium schools of Mehasana district. Researcher had selected sample via purposive cluster method.

Major findings of the study were that-

- The students learning through conventional method showed higher achievement than the students learning through computer.
- The learning through Computer Assisted Learning showed higher achievement than the students learning through programmed learning.

Singh, D. (2007) conducted study on “Effectiveness of Interactive Multimedia CALL package on English Grammar achievement of std 8th students. The objectives of study were-

1. To develop a CALL package to teach English grammar to std 8th. (CBSE)

2. To study the effectiveness of developed CALL package in terms of achievement of English grammar with a delayed time. i.e., after two weeks of instruction.

Students of std.8 of Bright Day school, CBSE Board, Vadodara, Constituted the sample for the present study. 32 students from each of the CBSE unit constituted the sample of the study.

Major findings of the study were that-

- The developed Multimedia CALL package was found to be effective for teaching three topics of English Grammar : (1) Phrases (2) Clauses (3) Types of sentences.
- There was a decrease in the standard deviation of experimental group from pre test to post test which showed that the treatment was effective for all types of individual differences in terms of pre test achievement scores.
- By using the computer, students were able to use their Academic Learning Time (ALT) more faithfully.
- CALL motivates the students to go beyond the point of initial mastery and practice activity until they become automatic.
- CALL decreased teacher domination of discussion in classroom.

Chhagh, S. (2004) conducted study titled “A study of construction and effectiveness of CAI in science and technology for the unit ‘Flowers and Fruits’ std-9th “. The objectives of study were-

1. To develop CAI package in subject of science and technology for the unit of ‘Flowers and Fruits’.
2. To study the effectiveness of the CAI program in relation to the students achievement.
3. To study the attitude of the students regarding to the effectiveness of CAI

Investigator had taken the sample of 60 students through the randomization method for both controlled and experimental group.

Major findings of the study were that-

- The study revealed that CAI was found to be an effective instructional technique for teaching.
- The students were satisfied and appreciated with the Computer Assisted Instruction program.

Dangar, B. (2003) conducted a study titled “A study of construction and effectiveness of CAI in English for the units ‘Sasa Rana’ in English for the students of std-7th”. The objectives of study were-

1. To develop CAI package in subject of English for the students of std-7th in ‘Sasa Rana’.
2. To study the effectiveness of CAI on students achievement.
3. To study the attitude of the students regarding the effectiveness of CAI.

Investigator had taken the sample of 64 students through randomization. Methods were similar for both controlled and experimental group.

Major findings of the study were that-

- The findings of the study revealed that the effectiveness of CAI was as same as in traditional method. No significant difference was found between both the methods.
- CAI program takes place of best teacher.

Sharma, D. (2003) conducted study entitled “Study of effectiveness of Computer Assisted Learning in Chemistry for the students of std-10”. The objectives of the study were-

1. To develop Computer Assisted Learning in chemistry for std-10 students.
2. To study the reaction of the chemistry students regarding the effectiveness of the developed CAL.
3. To study the effectiveness of CAL in chemistry in terms of achievement of std-10 students.

The investigator had taken the sample of 35 students of std-10 purposively from the two divisions of 10 science classes.

Major findings of the study were that-

- CAL was found to be effective for teaching chemistry at std-10.
- Student's reaction towards the CAL was found to be favorably related to interest, content and presentation.
- The chemistry teacher had given favorable statement regarding content, language and mode of presentation.

Dalwadi, N. (2001) conducted a study on "Development of computer Assisted Instruction in Science for the students of std-9". The objectives of study were-

1. To developed Computer Assisted Instruction (CAI) in science for std-9.
2. To study the effectiveness of Computer Assisted instruction in terms of achievement.
3. To study the opinion of the science teachers and students regarding the effectiveness of the developed Computer Assisted Instruction.

Investigator had used purposive sampling method for selecting the sample. Investigator had selected the sample of std.9, for CAI on topic of 'Light'.

Major findings of the study were that-

- CAI was found to be an effective individualized instructional technique for teaching science to std-9.
- Students were found to have a positive opinion towards the developed CAI.
- Student's opinion towards the CAI was found to be favorable as far as the statement related to the interest, mode of presentation, content clarity and the questions asked in the CAI were concerned.
- Science teachers were found to have a positive opinion towards developed CAI.
- Some of the teaching points on CAL material solar system and magnet have been found wanting in terms of mode of presentation, spatial contiguity and temporal contiguity.
- Text mode was found dominating both the CAL material which is against the characteristics of computer.

Khirwadkar, A. (2001) developed a Computer Software for the students of Standard XI. The objectives of study were-

1. To develop CAI package in subject of Chemistry for standard XI science students studying GSEB syllabus.
2. To study the effectiveness of the software package in terms of instructional time and achievement of student.
3. To study the effect of the software package on students' achievement in relation to students' (a) intelligence level, (b) motivation level, and (c) attitude towards the package.
4. To study the attitude of the students and teachers regarding the effectiveness of the CAI package with regard to aspects of the software, such as, content of the software, presentation of the software, examples and illustrations, graphs and figures, evaluation items, utility at the software and instructions given in the instructional manual that are provided with the software.

The sample consisted of 60 students selected randomly. Out of 60 students, 30 students were in experimental group and 30 students in control group.

Major findings of the study were that-

- The software package developed for teaching three units of standard XI chemistry textbook of GSEB was effective in terms of student's achievement and time.
- The experimental group took 45 hours time on an average to complete the three units.
- The academic achievement in chemistry of students of experimental group was found to be affected by variables like IQ, academic motivation and attitudes.
- Majority of experimental group students had positive attitude about various aspects of software package especially regarding presentation of content, logical sequencing and language used for understanding the content. The school subject teachers always held the positive attitude.

Patel, R. (2001) conducted study on “Learning through Computer Assisted Learning Material in relation to selected production variables and contiguity”. The objectives of the study were-

1. To analyze CAL material in relation to the production variables and contiguity.
2. To study the effectiveness of CAL material in terms of mean achievement of students.
3. To study the learning through various message items in relation to production variables and contiguity.

The sample consisted of thirty students of std-8 from Shreyash Vidhyalaya, Manjalpur, Vadodara which were selected purposively for the study.

Major findings of the study were that-

- The correlated ‘T’ value on CAL material on solar system and magnet was found to be significant at 0.01 levels. So there has been significant gain through interaction with the CAL material.
- Largely the status of CAL material was found to be significantly higher on production variable and contiguity Vis a Vis achievement.

Yadav, S. (2000) conducted study on “The effectiveness of the Computer Software for students of std.1”. The objectives of study were-

1. To study the effectiveness of computer software in terms of achievement of the students.
2. To study the effectiveness of computer in terms of:
 - A. Perception of teachers
 - B. Perception of students

Students of standard 1 were randomly selected as sample for alphabet software and animal software. Tools were constructed to be used as pre-test and post test, semi-structured interview was taken up for teachers and informal interview and observation for students.

Major findings of the study were that-

- There was a significant gain in terms of mean achievement on the software on alphabets and animals. Most of the students were found to have positive reaction towards the software.
- Teachers welcomed the media integrated approach towards learning.

Zyoud, M. M. (1999) carried out a study on Development of Computer-Assisted English Language Teaching for VIII Standard Students. The objectives of study were-

1. To develop a computer assisted English language teaching program for standard VIII Gujarati medium students.
2. To study the effectiveness of the computer assisted English language teaching program on students' achievement in terms of Vocabulary, Grammar and Comprehension by taking pretest and IQ as covariates.
3. To study the effectiveness of the computer assisted English language teaching program in terms of students' achievement of all above mentioned with respect to their intelligence, motivation and attitude.

Students of class VIII of two Gujarati medium schools comprised the sample for the study. The experimental group consisted of 66 students and control group consisted of 46 students. The tools used in the pilot study were also used in the final stage for the study.

Major findings of the study were that-

- When the computer is used to its full potential, it can create an atmosphere where the students can learn and interact with the computer without being afraid of the teacher's presence.
- The computerized exercises can help the student become familiar with significant amount of vocabulary, grammar and comprehension because it provides effective individualized instruction.

Das, (1998) conducted a study entitled “Exploring Effectiveness of Computer Assisted Learning Materials on rhyme in different modes.” The objectives of study were-

1. To develop Computer Software on rhyme in Test (T), Test Music (TM), Graphics Text (GT), Graphics Text Music (GTM) and Graphics Text Music Recitation (GTMR) modes.
2. To study the Effectiveness of Computer Assisted Learning Material (CALM) prepared in different mode for teaching the rhymes in terms of-
 - A. Word teaching of the students.
 - B. Analytical understanding of students.
 - C. Comprehension understanding of students.
 - D. Writing ability of students.
 - E. Recitation ability of the students.

Sample consisted of pupils of seventh grade which were selected randomly from section of one school. The design of the study was experimental in nature.

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Saruparia, (1992) undertook an investigation on entitled, “A study of Computer Education in the secondary school of Baroda city” with following objectives.

1. To study existing status of computers Education in secondary schools.
2. To find out organizational problems of Computer Education in secondary schools.
3. To identify the perception of teachers and students on integrating computers with classroom teaching.

Twenty schools from Baroda city were selected for the study. Data were collected from principals, all computer teachers and 114 students of those selected schools. Information schedule and Questionnaire were used for the collection of required data.

Major findings of the study were that-

- Most of the principals showed a positive attitude towards Computer Education at secondary level.
- Many of the principals were eager to make Computer Education compulsory at primary and secondary level of Education.
- Most of the schools kept the periods of the Computer Education in their daily school time tables.
- In most of the schools Computer Education was privately managed and there were as schools with class project were facing difficulties regarding management.

3.3 Conclusion

In short, Computer Assisted learning can play an important role in the improvement of teaching learning process through its various techniques. It is also fruitful for both teachers as well as students to improve their understanding regarding their subjects. Through this new learning concept, Learners are able to comprehend the abstract themes with play-way method in a far better way. Previous studies show that Computer Assisted learning was able to maintain the continuous interest level of the learners so that simultaneously CAL improves the achievement and interest of the learners. They provide new opportunity to peep in to the other world of teaching and learning.

During the review of the related literature it was found that large numbers of studies were done on teaching English through Computer Assisted Learning in comparison to the other subjects. It was also found that there were number of CAL packages which gave satisfactory outcome. Numbers of investigators have used different videos, pictures, and 3D animations for preparing their packages which is very useful to create curiosity and interest for the learners. Previous studies fulfill

the learner's expectations and desires through its effective use. But all the studies were carried out on first language learners. Very few studies have focussed on utilizing CAL package in second language learning. This shows that there is more need for preparing CAL by using present available software package. It was felt that CAL package can be beneficial for students studying English as a second language. Hence, the present study was undertaken which is an attempt in this direction to develop a CAL package in English for Gujarati medium students and study its effectiveness.