DEVELOPMENT OF COMPUTER-ASSISTED ENGLISH LANGUAGE TEACHING FOR VIII STD. STUDENTS
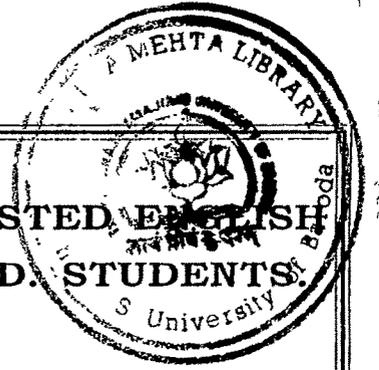
An Abstract of the

Thesis Submitted

to

The Maharaja Sayajirao University of Baroda

Vadodara for the Degree of

Doctor of Philosophy

in Education

Guide :   Researcher :

Dr. N. Pradhan   Munther Mohammad Zyoud

CENTRE OF ADVANCED STUDY IN EDUCATION

FACULTY OF EDUCATION & PSYCHOLOGY

THE M.S. UNIVERSITY OF BARODA

VADODARA

August 1999

AN ABSTRACT

INTRODUCTION

In recent years the computer has established itself as an important feature of modern life. Many of us use computers daily, some times without even being aware of the fact. Banking, traffic control, word-processing, social security applications, accounting and record-keeping, design, office management, computer games, various hobbies etc. these are a few of the applications where computers are now a part of our everyday life. The computer is a servant. Its role in education is that of a medium. The computer can be used as the mainstay of a course, or for backup, revision, reinforcement, extension, or a variety of other purposes. The computer offers a tool to students which allows them to assume mastery of their own learning experience. Today with the development of modern technology, computer has brought a revolution in English language teaching. The fact that computers are used in the teaching of other subjects and are put to a great many applications in society have made language teachers aware of the many ways in which computers may be used to organize and manipulate to teach languages. What distinguishes the computer from other pieces of equipment, such as tape recorders, film projectors, video, and what forms in fact the basis of

its claim as an educational aid is its interactive capability:" The unique property of the computer as a medium for education is its ability to interact with the students what the rules are and what the students has made and react in a manner which leads him not only to correct his mistake, but also to understand the principles behind the correct solution" (Nelson et al. 1976).

The computer if used effectively can carry out tasks inconceivable by other means. Traditionally, it acts as a tutor, assessing the learner's reply, recording it, pointing out mistakes, giving explanations, it guides the learners towards the correct answer, and generally adopts the materials to his or her performance. Computers can be used to teach many aspects of the language, and many studies have been conducted to find out the effectiveness of the computer in the teaching of writing, grammar, vocabulary, and comprehension.

THE PRESENT STUDY

The present study has been conducted to develop a package to teach English to std.VIII students and to see its effect on the students achievement in term of vocabulary, grammar and, comprehension. It is also intended to see whether the high achievers and low achievers students have the same attitude toward the

package? And whether students irrespective of their IQ and Motivation level achieve to the same level in grammar, vocabulary and comprehension.

RATIONALE OF THE STUDY

With the development of modern technology, many schools have computers, and they have started utilizing them for educational purposes. The review of the related literature carried out revealed clearly that CALL has an effect on students' achievement level in terms of vocabulary, grammar, reading, writing, attitude, feedback and anxiety. In Baroda city the subject of English is taught in some of the schools as first language and in some other schools it is taught as a second language. In many schools where English is taught as a second language, students are facing a lot of problems in learning to read, write and communicate in the English language, and this is because of the predominance and interference of the mother tongue, and lack of exposure to English in a proper way hinder the students from communicating in the language. Teachers are unable to interact with students due to the crowded classrooms (Shah,1996, Sharma, 1986, and Soni,1978). Based on the findings of the related literature and on the interactive nature of the computer and its ability to individualize the learning experience, the investigator feels that the

computer assisted language teaching which he has developed may be appropriate to teach English as a second language for Gujarati medium students. Researches reveal that computer enhances the students' achievement through self evaluation without the fear of being ridiculed by their teacher, and also they can learn by themselves and at their own pace.(Last, 1979, Rosenbaum, 1969, Levy, 1987, and Magidson, 1978). So certain questions arise at this stage are as follow:

(1) Whether the programme will have significant effect on the achievement of the students in terms of vocabulary, grammar and comprehension or not?

(2) Whether high achievers and low achievers, bright and dull students will develop the same attitude towards the package, and they will be affected to the same extent or not?

(3) Whether students and teachers will like the package or not?

(4) Whether the package will have any effect on students' Vocabulary, Grammar and Comprehension with respect to their Motivation, IQ and Attitude or not.

STATEMENT OF THE PROBLEM

DEVELOPMENT OF COMPUTER-ASSISTED ENGLISH LANGUAGE TEACHING FOR VIII STD. STUDENTS.

OBJECTIVES OF THE STUDY

(1) To develop a Computer Assisted English Language Teaching programme for STD. VIII Gujarati medium students.

(2) To study the effectiveness of the Computer Assisted English Language Teaching programme on students' Achievement in terms of,

      a. vocabulary

      b. grammar, and

      c. comprehension,

    by taking pretest and IQ as covariate.

(3) To study the effectiveness of the Computer Assisted English Language Teaching programme on the Experimental group students' Achievement in Vocabulary, Grammar and Comprehension with respect to their Intelligence, Motivation and Attitude.

(4) To study the Attitude of the students towards the usefulness of the Computer Assisted English Language Teaching programme.

HYPOTHESES

1. There will be no significant difference between the adjusted Mean Achievement scores of the Experimental group and the Control group students in Vocabulary taking IQ as covariate.

2. There will be no significant difference between the adjusted Mean Achievement scores of the Experimental group and the Control group students in Vocabulary taking pretest as covariate.

3. There will be no significant difference between the adjusted Mean Achievement scores of the Experimental group and the Control group students in Grammar taking IQ as covariate.

4. There will be no significant difference between the adjusted Mean Achievement socres of the Experimental group and the Control group students in Grammar taking pretest as covariate.

5. There will be no significant difference between the adjusted Mean Achievement socres of the Experimental group and the Control group students in Comprehension taking IQ as covariate.

6. There will be no significant difference between the adjusted Mean Achievement socres of the Experimental group and the Control group students in Comprehension taking pretest as covariate.

7. There will be no significant difference between the adjusted Mean Achievement socres of the Experimental group and the Control group students in Vocabulary, Grammar, and Comprehension taken together by taking IQ as covariate.

8. There will be no significant difference between the

adjusted Mean Achievement socres of the Experimental group and the Control group students in Vocabulary, Grammar, and Comprehension taken together by taking pretest as covariate.

9.   There will be no significant difference between the Mean Achievement scores of students with High Intelligence and students with Low Intelligence studied through the Computer Assisted English Language Teaching Programme in Vocabulary.

10.   There will be no significant difference between the Mean Achievement scores of students with High Intelligence and students with Low Intelligence studied through the Computer Assisted English Language Teaching Programme in Grammar.

11.   There will be no significant difference between the Mean Achievement scores of students with High Intelligence and students with Low Intelligence studied through the Computer Assisted English Language Teaching Programme in Comprehension.

12.   There will be no significant difference between the Mean Achievement scores of students with High Intelligence and students with Low Intelligence studied through the Computer Assisted English Language Teaching Programme in Vocabulary, Grammar and Comprehension taken together.

13.   There will be no significant difference between the

Mean Achievement scores of students with High Motivation and students with Low Motivation studied through the Computer Assisted English Language Teaching Programme in Vocabulary.

14. There will be no significant difference between the Mean Achievement scores of students with High Motivation and students with Low Motivation studied through the Computer Assisted English Language Teaching Programme in Grammar.

15. There will be no significant difference between the Mean Achievement scores of students with High Motivation and students with Low Motivation studied through the Computer Assisted English Language Teaching Programme in Comprehension.

16. There will be no significant difference between the Mean Achievement scores of students with High Motivation and students with Low Motivation studied through the Computer Assisted English Language Teaching Programme in Vocabulary, Grammar and Comprehension taken together.

17. There will be no significant difference between the Mean Achievement scores of students with High Attitude and students with Low Attitude studied through the Computer Assisted English Language Teaching Programme in Vocabulary.

18. There will be no significant difference between the

Mean Achievement scores of students with High Attitude and students with Low Attitude studied through the Computer Assisted English Language Teaching Programme in Grammar.

19. There will be no significant difference between the Mean Achievement scores of students with High Attitude and students with Low Attitude studied through the Computer Assisted English Language Teaching Programme in Comprehension.

20. There will be no significant difference between the Mean Achievement scores of students with High Attitude and students with Low Attitude studied through the Computer Assisted English Language Teaching Programme in Vocabulary, Grammar and Comprehension taken together.

OPERATIONAL DEFINITION OF THE TERMS

COMPUTER-ASSISTED ENGLISH LANGUAGE TEACHING

It is the computer package which was developed by the investigator to teach Vocabulary, Grammar and Comprehension of the four lessons that were selected from the English textbook (Gujarat State Board Of School Textbooks 1992. Published by: S. M Patel, Director on behalf of Gujarat State Board Of School Textbooks, Gandhinagar.) of Std.VIII Gujarati medium.

VOCABULARY

Those words which were taken from the four lessons selected for developing the package, and those words only which appear inside the box at the beginning of each lesson are taken as vocabulary.

GRAMMAR

The four parts of speech viz. Noun, Pronoun, Adjective and Preposition which are there in those four lessons. The selected four parts of speech are taken as grammar.

COMPREHENSION

The text of the four lessons included in the package i.e. Mr Nair's Circus, A Railway Station, Dr Jadeja's Hospital and In The Kitchen. Will be used as comprehension in the package.

INTELLIGENCE

Here in this study intelligence is the person's capacity at the time of test to apprehend meaningless figures presented for his observation, see the relations between them, conceive the nature of the figure completing each system of relations presented, and , by so doing, develop a systematic method of reasoning.

ATTITUDE TOWARDS CAELT

Here in this study attitude is the liking or disliking of a student to the Computer Assisted Language Teaching Programme developed by the researcher.

MOTIVATION

Here in this study motivation is the score secured by the students on Junior Index of Motivation (JIM) scale developed by Frymier (1970).

DELIMITATION OF THE STUDY

The study is delimited to those four units selected from the English textbook for std.VIII. Gujarati medium and to their contents only in terms of vocabulary, grammar and comprehension. Writing and Oral skill were not considered.

REVIEW OF RELATED LITERATURE

Through chapter II it was evident that Computer Assisted Language Learning/Instruction has been the focus of many researchers. Many studies were conducted to study the effect of Word processing on students' revision at the college and school levels, and also to study the effect of Word Processor on students' writing and their attitude toward writing. The methodology followed in these studies was mainly of experimental design, in which

the Word Processor was compared to pen and paper or typewriter.

In the area of Reading. Several studies compared the effect of computer assisted instruction on students' reading achievement with a traditional method of teaching reading. most of the studies reviewed focused on reading achievement and comprehension, with some studies focusing on comprehension and vocabulary, or comprehension and attitude toward reading and the computer.

In the area of Vocabulary, many studies were conducted to study the effect of computer assisted instruction on students' achievement in vocabulary. The focus of these study was on vocabulary as a separate variable. In the area of Grammar, several studies were also conducted to study the effect of computer assisted instruction on students' achievement in grammar compared with the traditional method of teaching grammar. The focus of these study was on teaching grammar through computer as a separate variable. Several studies were conducted to study the attitude of the students toward the computer assisted instruction in different fields. The methodology followed in these studies or in most of them was experimental in nature with pre-test, post-test, treatment, control group designs.

Therefore, after reviewing the literature, the researcher could identify the research gap which was not dealt with in these studies. To bridge the gap the researcher has undertaken this study which focuses on the effect of Computer-Assisted English Language Teaching Programme on students' achievement in vocabulary, grammar, and comprehension. The study also focuses on the effect of IQ, Motivation, and Attitude on the students' achievement in vocabulary, grammar and comprehension. So it can be concluded that, the research literature reviewed helped the researcher in identifying the research gap, developing the conceptual framework, formulating the objectives of the study, and in developing the methodology of the present study by focusing on the research gap identified in the area of computer assisted instruction in teaching English language.

PLAN AND PROCEDURE OF THE STUDY

The study was done in two phases i.e. phase I and II which is as follows.

PHASE - 1 DEVELOPMENT OF THE PACKAGE

Four lessons were choosen from the English text book of standard VIII, Gujarati medium for the purpose of the package. Those lessons were Mr. Nair's circus, A Railway

Station, Dr. Jadeja's Hospital, and in the Kitchen. The package was developed following content analysis, systematisation, pilot study and modification. The package was developed using BASIC.

PHASE -2 EXPERIMENTATION

The second phase of the study is the experimentation of the package to find out its effectiveness on the students' achievement level.

FINAL EXPERIMENT

The methodology followed for the final experimentation is presented below. It includes the details description of the design of the study, selection of sample, construction of tools, preparation for the experiment, implementation of the CAELT for the final experiment and the statistical technique used for the data analysis.

DESIGN OF THE EXPERIMENT

The study followed a Pre test - Post test, control group design. Pre-test scores and the IQ scores were used as covariate.

SAMPLE

Students studying in standard VIII Gujarati medium were taken from two schools to serve as the sample for

this study. Students of one school i.e. Rosary school, Baroda formed the Experimental group, and students of the other school i.e. G.E.B school, Baroda formed the Control group.

TOOLS FOR THE FINAL EXPERIMENT

The tools used in the pilot study were also used in the final experiment viz., Pre-test, Raven's Progressive Matrices sets A, B, C, D and E (Raven 1960), JIM Scale (Junior Index of Motivation by Frymier (1970) and translated into Gujarati by Dr. Desai (1970) and the Post-test. The above mentioned tests were administered on both the groups. To study the Attitude of the students towards the package the researcher developed and administered an Attitude scale on the Experimental group only after the final experiment.

PREPARATION FOR THE EXPERIMENT

For implementing the package for the final experiment the investigator approached two schools in Baroda city. These two schools were Rosary school and G. E. B school. The investigator administered the following tests before starting the experiment. The tests were:

1. Pre-test Achievement in English developed by the investigator.

2.   Raven's Progressive Matrices Sets A, B, C, D and E
     (developed by Raven 1960).

3.   JIM SCALE (Junior Index of Motivation developed by
     Frymier (1970) and translated by Dr.Desai   in
     Gujarati(1970).

The four lessons selected for the study by the
investigator   were   in   consultaion   with   the   English
teacher. The investigator oriented the students about the
package, the purpose of the package, and how to use it to
the Experimental group. At the end the investigator
administered a Post-test Achievement in English on both
the groups and an Attitude scale on the Experimental
group only.

IMPLEMENTATION OF CAELT

The school's computer lab consist of 20 PCs, it was
difficult to accommodate all the students in one sitting
because the very basis of individualised instruction is
to provide necessary facilities to individual student,
and   therefore,   one   computer   to   one   student.   The
researcher therefore, had to divide the class into four
groups. Each group was exposed to the package for half an
hour every day at the recess time for two and a half
months (38 Hours). Each file was presented four times, as
the first group who started the file would come again
after four days to start the second file or to continue

—

from where they left off in the first period. The
researcher attended all the computer periods and took the
students log to see their regularity and to register
where each student had left out to avoid unnecessary
repetition of the same material to the students. The
teacher in the control group was asked to teach the same
contents included in the package i.e. the four lessons in
the traditional way. The Experimental group students were
instructed to go through the material at their own pace.

TECHNIQUE USED FOR THE ANALYSIS OF DATA

The data for the first objective has been analysed
qualitatively. The data obtained from the final
experiment of the package were analyzed objectivewise as
under in the second phase.

For second objective the data on students achievement
scores were analyzed with the help of ANCOVA.

For third objective of the study students' achievement
scores were subjected to "t" tests.

For fourth objective the data were analyzed
qualitatively.

FINDINGS OF THE STUDY

The findings of the present study were as follows.

1. Computer-Assisted English Language Teaching Programme was found to be an effective individualized instructional technique for teaching English to Standard VIII Gujarati medium students. It helped the students of the Experimental group to learn more than the students of the Control group in Vocabulary and Grammar. Whereas, in Comprehension the Package had no effect on the students' achievement.

2. Students' level of IQ was found to have an impact on students' achievement in Vocabulary and Grammar. Whereas, in Comprehension the level of IQ did not exert any impact on students' achievement.

3. Students' level of Motivation was found to have no impact on students' achievement in Vocabulary and Grammar. Whereas, students' achievement in Comprehension seemed to have been influenced by students' level of Motivation.

4. Students' Attitude towards the Package was found to have an impact on students' achievement in Grammar only. Whereas, in Vocabulary and Comprehesnion the Attitude seemed to have no impact on students' achievement.

5. Students were found to have a positive attitude towards the Computer-Assisted English Language

Teaching Programme. Students' Attitude towards the
package was found to be favourable as far as the
statements related to the Vocabulary items,
Grammatical concepts, Comprehension units and
Evaluation tests were concerned, and mixed or neutral
Attitude towards the package as far as the statements
related to the overall aspects of the package were
concerned.

IMPLICATIONS OF THE FINDINGS

The findings of this study have implications for using
the computer in teaching English language in schools
where English is a second language. The findings show
that when the computer is used to its full potentials it
can create an atmosphere where the students can learn and
interact with the computer without being afraid of the
teacher's presence. The students can learn at their own
pace and interact with the computer privately without
being afraid of committing any mistakes. The ability of
the computer to respond immediately to the students'
performance is one of its most useful characteristics.
Presentation of words for meaning can take advantage of
the dynamic qualities of the screen. The computer can
support countless types of exercise to drill and test
Vocabulary, and Grammar including matching procedures,
identifications, multiple-choice formats, fill in the

blanks and short answers. Computerised exercises can help the students become familiar with significant amounts of Vocabulary. Individualized instruction is a key factor in teaching and learning, the computer as a teaching aid can provide this kind of individualization very effectively. Computer-Assisted Instruction is important in teaching Vocabulary, Grammar and Comprehension because it provides effective individualized instruction. The computer can control, deliver, evaluate and inform the students of their achievement. The findings also have implications for the school to start and utilize their computer laboratory for teaching English and other languages instead of just using the computers to teach computer languages. It has also implication for the teachers. The teachers can prepare materials well in advance and ask the students to go through them, this will free the teacher and let him concentrate on more useful activities instead of wasting his time correcting the students note books, because the computer can do all these in no time, the computer can check the students answers, inform the students of their mistakes, and grade them.

SUGGESTIONS FOR FURTHER RESEARCH

1. More software packages should be developed to teach English Language in school where English is a second language.

2. In developing software packages more attention should be paid to Comprehension. Students should be asked to write the answer themselves instead of giving them the answer in a multiple-choice format.

3. Software packages should cover the entire textbook of the class concerned.

4. Students' level of IQ, Motivation and Attitude should be taken into consideration while preparing or developing any software package for teaching English Language to students whose mother tongue is other than English. Students have different abilities, some of them learn fast and some need a lot of time to learn, so to provide the students with the time they require to learn a given task, the teacher should know the students' ability well in advance before he develop the Package.

CONCLUSION

The findings of this study proved that when the computer is used to its full potentials it can help the students achieve more in learning Vocabulary, Grammar and Comprehension irrespective of their level of IQ, Motivation, and Attitude. It helps the students to learn better because it provides them with a lot of freedom and responsibility to learn at their own pace and to monitor their learning without any involvement of the teacher.

When the students are left to learn by themselves they develop a positive attitude towards the method of instruction and this is what the researcher found in this study. The attitude of the students towards the Computer Assisted English Language Teaching Programme was positive.