

EFFECTIVENESS OF CAI IN COMPARISON WITH THE MEAN SCORES OF BOYS AND GIRLS WITH RESPECT TO CHANGE IN ATTITUDE TOWARDS ENGLISH GRAMMAR IN EXPERIMENTAL GROUP

Dr. Prabha S. Chiniwar*

ABSTRACT

The purpose of the study is to develop a programme for teaching of English Grammar for students studying in VIII Standard. Hence, the researcher has decided to develop a latest instructional technology based programme on English Grammar keeping in view the individualized instruction, i.e., Computer Assisted Instruction (CAI).

The present study being an experimental study with the criterion variables like attitude towards English Grammar and achievement in English grammar. The study involves pre-test and post-test design with treatment in-between. Research evidenced indicates that the CAI can improve student's performance; therefore, the focus of the study is on the development of CAI for teaching English Grammar.

CAI being an innovative approach to teaching-learning process endless drill and practice without repetition, and provides immediate feedback to the learner on his/her progress. Thus, the study assumes its significance and relevance in the present context.

INTRODUCTION

The languages should be taught in parallel with each other; even in the other subjects the grammatical errors should be checked. The ideas should be allowed to flow and the language should be made compulsory to put the ideas in the ink. This practice at the early stage not only makes the language better, but makes the effective thinking and creativity possible. Understanding and writing independently should be taught strictly, so that in the longer run around development along with the language takes place. And the languages should be made compulsory in every professional and non professional course.

Grammar is the theory of language. Every language has its own grammar. Whether it is one's mother-tongue or a second language that one is learning, the grammar of the language is important. This is because acceptability and intelligibility, both in speech and in writing within as well as outside one's circle or group, depend on the currently followed basic notions and norms of grammaticality. A knowledge of grammar is perhaps more important.

In the schools the students speak the language which is medium of instruction fluently. Without caring for the grammatical error, where as the medium of instruction is not a particular language, that language lacks fluency as well as grammar. Overall in today's school education the language is suffering just because of lack of depth of grammar in teaching learning process such as Vocabulary, Spellings, Tenses, Sentence formation, Comprehending, Editing, etc.

Computer Aided Instruction (CAI) can help the student to see the unseen, to test theoretical concepts, to comprehend abstract ideas, to communicate more effectively reducing the teacher-student ratio and helps to take more informed decisions. Computer graphics make it possible to visualize and to grasp the concepts. The CAI packages are interactive in nature and hence share some features of an informed responsive teacher interaction it engages the mind and makes the best possible use of the student's time.

The research evidence shows that CAI enhances students' attitudes toward several aspects of schooling. Some researches took these investigations a step further by asking

*Asst. Professor, B.V.V.S.P.G. Dept. of Studies in Education and Research Centre, Bagalkot, Karnataka

students what it is about CAI that they like. Students' preferences also contribute to our understanding of why CAI enhances achievement.

NEED FOR THE STUDY

The performance of students in secondary school exams has revealed consistently that the percentage of failure in English in comparison with other subjects is the highest. The standard of teaching English, as well as its grammar, comprehension of students in secondary school has considerably declined over the years.

The teachers are baffled by the countless mistakes committed by the secondary school students. It is generally agreed by the psycholinguists that the teacher has to prepare the self instructional material, according to the nature of the language to be learnt by the students.

The investigator is expected to diagnose the errors in learning of English by his/her students and prepare self instructional material or programmed learning materials to make the difficult grammar concept, easy to understand.

So, this process requires research skill, time and energy which are not easily available to the school teachers. Moreover, after reviewing the related studies in the area of the present problem, the researcher found the gaps in the study. The hypotheses of the study were framed looking into the scenario of the classroom conditions in schools. Hence the researcher has undertaken this study and developed the programme for selected English grammar for VIII standard students of Kannada medium.

The purpose of the study is to develop a programme for teaching of English Grammar for students studying in VIII Standard. Hence, the researcher has decided to develop a latest instructional technology based programme on English Grammar keeping in view the individualized instruction, i.e., Computer Assisted Instruction (CAI). The present study being an experimental study with the criterion variables like attitude towards English Grammar and achievement in English grammar. The study involves pre-test and post-test design with treatment in-between. Research evidenced

indicates that the CAI can improve student's performance; therefore, the focus of the study is on the development of CAI for teaching English Grammar. CAI being an innovative approach to teaching-learning process endless drill and practice without repetition, and provides immediate feedback to the learner on his/her progress. Thus, the study assumes its significance and relevance in the present context.

REVIEW OF RELATED LITERATURE

There are many studies conducted on CAI. The studies conducted by Dange J.K. (2006), Ardek-Delek, SezanAli Hasan (2000), Chang, Chung-yen (2000,2002), Yakub Mohammed (2001), Vaidyanathan and Rangarajan (2001), Subhas Chandra Panda (2000), Rajaswamynathan (2000), Noh-Tachee (1999), Kalamadi, M. B. (1998), Sanjay L. Mahajan (1995), D'Souza Flosy C.R. (1993) concluded that Computer Assisted Instruction is effective in the development of academic achievement in different subjects. Studies conducted by Krishnakumar (2004), Vasanthi & Hema (1996) and Swatantradevi (1996) found that video assisted instruction is effective than the conventional method of teaching in the development of academic achievement.

All these studies clearly reveal the importance of Computer Assisted Instruction method of teaching in different subjects at different levels over the conventional method of teaching science in improving the academic achievement and useful for testing and guidance.

STATEMENT OF THE PROBLEM

This study examined the efforts of teaching English grammar through Computer-Assisted Instruction in bringing expected changes in the attitude and achievement of students. Virtually, all courses at the Secondary level requires students to learn the basic concepts and principles of English grammar, so it is essential that we determine the best ways to integrate technology of teaching and content of English grammar. This integration of technical and academic perspectives is essential if students are to be prepared for higher education in which

English language is predominantly used. Keeping this purpose in view, the present study has been designed. Thus, the statement of the problem is as stated below:

OBJECTIVES

1. To find out the attitude of boys and girls towards the English grammar before treatment.
2. To find out the attitude of boys and girls towards the English grammar after treatment.
3. To study the difference in boys and girls with respect to change in attitude towards English grammar in experimental group.

HYPOTHESES

Ho1 There is no significant difference between boys and girls of Experimental group in their attitude towards English grammar before treatment.

Ho2 There is no significant difference between boys and girls of Experimental group in their attitude towards English grammar after treatment.

Ho3 There is no significant difference between boys and girls of Experimental group in their attitude towards English grammar gain scores.

VARIABLES

In experimental research method, the investigator manipulates variables(S) (independent variable) under controlled or natural field conditions by assigning the samples randomly to experimental and examines whether changes occur in a second variable (S) (dependent variable). The investigator considered two major types of variables, viz., Independent and Dependent Variables in the present study.

Independent Variable- a. CAI method of teaching English Grammar

Dependent Variables- a. Attitude towards English Grammar
b. Achievement in English Grammar

SAMPLING

The sample consists of 50 students studying in VIII Standard during the academic year 2007-08. In order to select only 50 students the non verbal group intelligence test was administered to the whole class (total 86 students). The obtained scores were arranged in a descending order, and the top 50 students from Sl.No. 1 -50 were selected and identified as an Experimental group.

TABLE 1
DETAILS OF THE SAMPLE BASED ON GENDER

Group	n	Boys	Girls
Experimental	50	21	29

CONSTRUCTION OF TOOLS

Due to the non-availability of appropriate standardized scales, the researcher constructed the following 2 scales, satisfying the objectives set forth in the present study.

- i. Attitude towards English Grammar
- ii. Achievement in English Grammar

PROCEDURE USED IN THE EXPERIMENT

A. Pre-Measurement

Test 1 : Attitude towards English Grammar

Test 2 : Achievement in English Grammar (Pre test)

B. Treatment

The Experimental treatment involved the teaching of a selected content of English Grammar, viz., 'Parts of Speech' and 'Punctuations' involving definitions, illustrations and enough exercises comprehensively covering the whole selected content for the students of VIII Standard.

A total of 9 concepts of English Grammar were taught by using Computer Assisted Instruction Design to the Experimental Group students.

C. Post-Measurement

Immediately after the completion of the treatment, the Post Test was administered. The Post Test items were from the selected content of English Grammar incorporated in VIII standard

Text Book (i.e. parallel to pre-test), and followed by the attitude towards English Grammar.

Test 4 : Attitude towards English Grammar

Test 5 : Achievement in English Grammar (Post test)

STATISTICAL TECHNIQUE

In pursuance of the objectives of the present study, the following statistical techniques were used to analyze and interpret the data collected

- Mean
- Standard Deviation, and
- 't' test

ANALYSIS AND INTERPRETATION

To test the hypothesis, the Comparison of Means of Boys and Girls of Experimental Group to Change their attitude with respect to dependent variables - Attitude towards English Grammar and Achievement in English Grammar Mean, S.D. and t values were calculated and results are presented in the table.

TABLE 2
COMPARISON OF MEANS OF BOYS AND GIRLS WITH RESPECT TO CHANGE IN ATTITUDE TOWARDS ENGLISH GRAMMAR IN EXPERIMENTAL GROUP

Test	Gender	N	Mean	SD	t- Value	P- Value	Significance
Pre-Test	Boys	21	44.9048	7.3885	0.3839	>0.05	NS
	Girls	29	45.6552	6.3879			
Post-Test	Boys	21	106.0952	12.2062	0.4970	>0.05	NS
	Girls	29	104.5862	9.2795			
Gain	Boys	21	61.1905	8.5535	0.9632	>0.05	NS
	Girls	29	58.9310	7.9144			

The obtained 't' value 0.3839 with respect to boys and girls in attitude towards English grammar in Experimental group before treatment is lesser than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups do not differ significantly in respect of the variable under consideration. That is, the hypothesis that boys and girls of Experimental group do not differ significantly in their attitude towards English grammar before treatment is accepted.

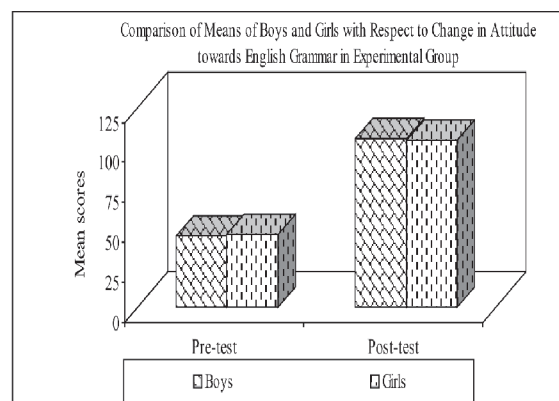
The obtained 't' value 0.4970 with respect to boys and girls in attitude towards English grammar in Experimental group after treatment is lesser than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups do not differ significantly in respect of the variable under consideration. That is, the hypothesis that boys and girls in Experimental group do not differ significantly in their attitude towards English grammar after treatment is accepted.

The obtained 't' value 0.9632 with respect to boys and girls in attitude towards English grammar in Experimental group gain scores is lesser than the tabled 't' value (1.97) at 0.05 level. It is, therefore, concluded that the two groups do not differ significantly in respect of the variable under consideration. That is, the hypothesis that boys and girls of Experimental group do not differ significantly in their attitude towards English grammar gain scores is accepted.

RESULTS

This implies that both the boys and girls in the Experimental group do not differ significantly in their attitude towards English grammar before and after treatment through CAI. Thus, the change in attitude towards English grammar after the treatment (gain) is not significant.

FIGURE 1
COMPARISON OF MEANS OF BOYS AND GIRLS WITH RESPECT TO CHANGE IN ATTITUDE TOWARDS ENGLISH GRAMMAR IN EXPERIMENTAL GROUP



MAJOR FINDINGS

1. There is no significant difference between boys and girls of Experimental group in their attitude towards English grammar before treatment.
2. There is no significant difference between boys and girls of Experimental group in their attitude towards English grammar after treatment.
3. There is no significant difference between boys and girls of Experimental group in their attitude towards English grammar gain scores.

CONCLUSIONS

Based on the discussing of findings of the study the following conclusions are drawn:

- i. Teaching English Grammar through CAI is more effective in changing the attitude of students towards English Grammar.
- ii. Teaching English Grammar through CAI is more effective in terms of enhancing achievement of students in English Grammar.
- iii. Teaching English Grammar through CAI does not produce differential effect on attitude of boys and girls towards English Grammar
- iv. Teaching English Grammar through CAI does not produce differential effect on achievement of boys and girls towards English Grammar.

EDUCATIONAL IMPLICATIONS

The findings of the present study revealed that teaching English Grammar through CAI is more effective in bringing changes in the attitudes of the students towards English grammar. Further, it is successful in influencing on the achievement of students in the English Grammar. Keeping these things in view the following implications are suggested for teachers, schools and educationists / scholars.

FOR TEACHERS

- i. Teaching English Grammar through CAI makes students to progress through a tutorial sequence from some appropriate starting

point to an appropriate finishing point, thereby it is more effective in bringing expected changes in the attitude of the students towards English Grammar. Hence, teacher can change the attitude of students towards English prose and poetry using this technique.

- ii. The main strength of the computer as a learning medium is the ability to process information very quickly and accurately. Since the CAI has an ability to adapt and respond to the learner's needs, difficulties and progress, it has impact on changing the attitude of students towards CAI. Hence, students' knowledge can be improved about the use of ICT in their life situations.
- iii. CAI provides immediate feedback to the learners on learner's progress in understanding English Grammar. Further, it also provides endless drill and practice without repetition at a pace than can be controlled by the learner. This strategy has enhanced the achievement of students in the English Grammar. Thus, teachers in the classroom can also improve performance of students in learning English prose and poetry by teaching these through CAI.

FOR SCHOOLS

- i. As the use of CAI is more effective in bringing effected changes I the attitude of students towards English Grammar as well as CAI, and in increasing achievement in English Grammar facilities may be created in all the schools for teaching of English subject using computers. The Karnataka Government has already initiated this programme under the scheme 'Mahiti Sindhu' in selected schools on experimental basis. The same scheme may be implemented in all the parts of Karnataka to teach all the school subjects using computer.
- ii. Meanwhile, the State Government can make sincere efforts in organizing series of workshop to develop software materials in all the school subjects for teaching through computers. For this purpose, it can also have memorandum of under standing with software developing companies to produce these materials on a large scale.

- iii. School text books must revised keeping in view the norms of the computer Assisted Instruction. The entire content in the textbook must be revised to suit the modern technology based on the principles of Programmed Learning.

FOR EDUCATIONISTS / SCHOLARS

- i. Studies could be undertaken by the educationists and scholars in examining the effectiveness of teaching Mathematics and Science subjects through CAI as the present study revealed the positive results in teaching English Grammar through CAI.
- ii. The scope of the present study is limited only to the teaching of English Grammar. The scholars can develop Computer Assisted Instructional materials for teaching prose and poetry in English subject.
- iii. As the present study revealed positive results in bringing about expected changes in the attitude and achievement of students in English grammar learning, the same type of efforts may be made in the teaching of Kannada grammar, Hindi grammar, etc.
- iv. The CAI may also be developed by the educationists and other scholars in remaining topics of English Grammar like singular and plural, active voice and passive voice, simple sentence into complex sentence, changes of degrees, etc.

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