EFFECT OF INSTRUCTIONAL MEDIA IN THE LEARNING OF ENGLISH GRAMMAR ON THE ACHIEVEMENT OF TEACHER TRAINING STUDENTS AT NAMAKKAL DISTRICT

By

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ABSTRACT

The present study is aimed at finding the effect of Instructional software program in the learning of grammar on the achievement of teacher training students of Namakkal District. Parallel group experimental method was adopted in this study. A sample of 80 students studying in the teacher training college were selected on the basis of their knowledge in English grammar. 40 students were involved in conventional learning of English grammar and another 40 were considered for learning grammar based on instructional media. The instrument of the study was an instructional software program used for teaching particular grammar items. Achievement test was used after establishing validity and reliability. It is evident from the analysis that instructional media played a significant role in the learning of English grammar. Experimental group students have made significant higher gains in learning grammar in comparison to conventional group students. In light of the findings of this study, it was recommended that English teachers use Computer Aided Instructions in their teaching.

Keywords: Instructional Media, English Language Teaching.

INTRODUCTION

The two years teacher training program aims to provide in-depth knowledge in Education, developing professional competencies along with relevant skills in teaching. It develops student application in practice in the field of educational break through. Getting students trained is a competent for the job market and every trained teacher has a wide range of professional responsibilities to be performed in the actual situations in educational institutions.

English is taught as an important course in the teacher training program as it is designed with a view to introduce students with the content method and practicum of English Language Teaching (ELT). The course intended to give the students a comprehension, background information and technique in teaching English with a special reference to our school curriculum. English is the language of administration and compulsory subject at the school and college levels. The growth of educational institutions create a high demand for English teachers who are need to fulfill the vacancies created in the department of English both in schools and in colleges. After acquiring communicative skills in the mother tongue students try to learn English as their second language. But the structure and content of English language does not resemble the mother tongue of the learners which raises hurdles in learning English especially grammar. Involvement and understanding in learning English is essential for the teachers to acquire the skill of correct usage in listening, speaking, reading, writing and all the other necessary skills of English language.

Most of the teacher training students are unable to step on to higher education due to the aversion and fear on English language and its grammar. Most of the students belong to rural area have barriers to enrich the communication skill of English language. Conventional method of teaching creates boredom to the students who expect new methods and techniques of teaching. Computer has established itself firmly in the world of communication technology and also succeeded in acquiring a fundamental role in the educational process. Computers are becoming more appeal to teachers and students because of their huge capabilities and extensive effectiveness. Using of instructional media in teaching is an innovative method introduced in many educational

colleges. Most of the teachers rely solely on 'chalk and talk' method. Over the years technical inventions have taken their place among the educational aids with which teachers surround themselves so as to make their teaching more effective. There are many mechanical aids like radio, television, tape recorder, film projectors, opaque projectors and over head projectors can be used in a class room. Books and tape recorders can tell a student what the rules are, and what the right solutions are, but they cannot analyze the specific mistake the student 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.

The computer gives individual attention to the learner at the console and replies to him. It guides the learner towards the correct answer and generally adapts the material to his performance. It allows the learner to choose between several modes of presentation, is something impossible to achieve with written hand books or work sheets. The computer thus promotes the acquisition of knowledge, develops the learner's critical demands and encourages active participation and vigilance over the learning material. Computer mediated instruction can provide a very valuable language learning experience. Hence the investigator being an English teacher interested to teach English grammar using an instructional software in the class room teaching felt that the use of software in English grammar teaching will be more effective and useful.

Objectives

To compare grammar learning scores of the students of experimental and conventional groups.

To compare the gains acquired in the grammar learning of experimental and conventional groups.

Importance of the study

Research on computer aided instructions in teaching English grammar is very few in Tamilnadu institutions especially in Teacher training colleges. It is anticipated that this study will shed light on the benefits of using computers in language learning in general, and in learning English grammar in particular. This study also attempts to bridge the gap between the theoretical and practical sides of using computers in teaching grammar. It may help

curriculum designers and methodologists to develop teaching materials which suit various ways of teaching and match students' level of achievement in English language in general and in grammatical structures in particular. Moreover, this study may help teachers by facilitating their role as well as students by helping them absorb the structures and rules of English quite easily and smoothly. Finally, this study may encourage other researchers to conduct further studies on the same topic, which will enrich both the local and international literature.

Limitations of the study

This study has the following primary limitations.

This study is confirmed to the first and second year students of Teacher training college of the academic year 2010.

The results of this study may be confined to the teacher training students.

This study is restricted to grammar items like Lexis formation, Comprehension, Construction of sentences and Transformation of sentences.

Related Literature

Many researchers are interested in using computers as a medium for teaching and learning. Therefore many studies were conducted on using computers for teaching many subjects especially English.

Pattern and Cadienno (1993) compared the relative effectiveness of traditional instruction and processing instruction, both for interpreting and producing Spanish object pronouns in OVS and OV order. The traditional instruction involved grammatical explanation and comprehension practice. The processing group performed significantly better than the traditional group.

Shang H (2007) examined the overall effect of using e-mails on the writing performance of the Taiwanese students in English. The major findings demonstrated that students made improvements on syntactic complexity and grammatical accuracy. The results also revealed that the e-mail writing was a positive strategy that helped improve their foreign language learning and attitudes towards English.

Abu- Seileek A (2004) conducted a study to explore the effect of a Computer assisted language learning program

on students' writing ability in English by teaching the program cooperatively and collectively. The findings of the study revealed that there were statistically significant differences between the experimental group who studied via computer and the control group who studied in the traditional method. The difference was in favour of the experimental group who studied via computer.

Christopher K (1998) investigated the achievement of fifth grade students who used computer for learning different subjects with their colleagues who only followed traditional methods. The students were distributed into three groups. Group 1 use computers for 60 minutes every week, group 2 use the computer in less duration and fewer tasks and group 3, the control group use traditional instructions. The results show significant differences in the achievement of students in favour of the groups who use computers.

Desey. D (1991) investigated the utilization of Instructional media in the classroom and its relationship to students learning and the teacher's efforts towards teaching particular concepts. He used experimental groups and control groups in this analysis. The experimental group was taught using instructional media and the traditional group or the control group was taught by conventional method. The results found that there were significant differences in the learning styles and the teacher's efforts in teaching through instructional media was easier than the conventional method of teaching.

Jebreen Hussain and Abu nabah. H. (2009) undergone a survey on the effect of Computer Assisted Language Learning in Teaching English Grammar on the Achievement of Secondary Students in Jordan. The findings stated that teaching English grammar using Computer assisted instructions have given good results. Moreover the researchers found that students were motivated by the use of computers in learning.

Lambert & Balderstone (2000) In terms of media involving television, the researchers added that televisions in the classroom are making an increasingly significant contribution to the teaching and learning of geography where pupils can learn about other cultures and develop their sense of place. They also reported that besides TVs, photographs and slides are also important sources of visual materials that help teachers to bring reality into their classroom. Such media also assist in developing students' knowledge, vocabulary, awareness and interpretation skills. Moreover, teachers can go further from illustrating the content to exploring values, attitudes and beliefs from the media.

Nagata N (1996) conducted a study concerning the relative effectiveness of computer assisted production (output) practice and comprehension (input) practice in second language acquisition. The result of the study indicate that the output focused group developed more grammatical skills than the input focused group, suggesting that the production practice required more syntactic processing on the part of the learner than the comprehension practice.

According to Abu Jaber (1987), the importance of instructional media for both teachers and students cannot be over emphasised. In social studies, the use of instructional media is essential to support learning because social studies are concerned about natural and social phenomena which cannot be easily expressed without the support of graphics maps, video, pictures, etc. The researcher points out that using instructional media in social studies classrooms widens the channel of communication between teachers and their students. The instructional media allow the growth of specific learning abilities and enhance intellectual skills and motor skills. The use of charts and models enables the teacher to present and illustrate many physical phenomena and issues easily and at the same time, allows them to focus attention on the characteristics of objects.

Nutta J (2001) conducted a study comparing the computer based grammar instruction and the teacher directed grammar instruction. The results showed that for all levels of English proficiency, the computer based students scored significantly higher on open ended tests covering the structures in question rather than teacher directed instruction. The results indicate that computer based instruction can be an effective method of teaching L2 grammar.

McEnery T, Barker A, and Wilson A (1995) investigated the use of computer based L2 grammar instruction. The results

of these studies seem to indicate that computer based grammar instruction can be as effective as or more effective than traditional instruction using work books and lecture methods.

In the computer-based instructional media, Davidson (1996) stated that the use of such media in geography lessons is imperative as it makes a valuable contribution to the quality of student learning. Such media can be used in several ways in geography lessons. PowerPoint, for instance, can be used to present geographical issues and data loggers for collecting weather data electronically. The researcher also pointed out that it is important to use learning aids to enhance student learning experience and they stress the link between poor learning with the failure to use visual aids and similarly effective learning to the professional use of visual aids.

Hypotheses

- There is no significant difference between the students taught through instructional media and the students taught through conventional method in the learning of lexis formation.

- There is no significant difference between the students taught through instructional media and the students taught through conventional method in the learning of comprehension.

- There is no significant difference between the students taught through instructional media and the students taught through conventional method in the learning of construction of sentences.

- There is no significant difference between the students taught through instructional media and students taught through conventional method in the learning of transformation of sentences.

Research Design

In this design two parallel equated groups are selected. One of the group was Experimental group (E) and the other was control group (C). Both groups were given pre-test and post-test.

Variables

Independent variables : Instructional media teaching and convensional method of teaching.

Dependant variables: General grammar knowledge of students.

Controlled variables: Sex, age and year of study.

Sample

This study aims at finding out the efficiency of the two methods namely instructional method of teaching and conventional method of teaching English grammar. First and second year students of teacher training college were selected for the study. Totally 80 students were selected. Among them 40 students were taken from the first year and 40 students were taken from the second year. Among the forty students of each year 20 students were selected as experimental group and 20 were selected as control group. The experimental groups were taught the selected grammar items through computer while the control groups were taught the same grammatical items by the conventional method.

Tools

To implement this study successfully, the researcher has developed two types of instruments.

- Achievement test and
- An instrumental software program.

The investigator's self made achievement test was used for the pre-tests and post-tests of both the groups. The same question paper was used for both pre-test and post-test to evaluate the pupils' skills in the English grammar exercise covering the topics are carried out consisting of one mark for each exercise item. The test comprises 50 multiple choice items of four choices. At the beginning of the test, the instructions of answering was given and the subjects were asked to choose the correct answer. The time allotted for answering was one hour.

Both the groups were administered a pre test in which the previous knowledge of the students were assessed. At the end of the study the same test was conducted to assess the students achievement on the topic.

Test of Validity

The content of the test was validated by a team of English language specialists. The team validated the content of the grammar items, instructions of the test, the relevance of the questions to the content, its suitability of attaining the

goals, number and arrangement of questions and time allotted. The remarks and suggestions of the team were taken into consideration and the researcher made the necessary modification before its application.

Test of Reliability

A pilot group of 30 students were randomly selected from the population of the study who were excluded from the sample. Test-retest method was used to check the reliability. First a test was administered to them and it was repeated on the same group after two weeks. The reliability correlation coefficient of the test results were calculated using Pearson correlation method. The obtained value was 0.79 which was an indication of its reliability.

The software program

The researcher has developed a computer software instructional program to teach the grammar items like Lexis formation, Comprehension, Sentence construction and Transformation of sentence. The software was a Flash version. The program was provided with explanations and ample examples and it was constructed in such a way that the student can receive feedback for his achievement and he can get his scores when he finishes any exercise. The researcher has constructed the program with the help of the programmers and the suggestions of the English language specialists were carried out before its administration and by this way its reliability was confirmed.

Experimentation

The experiment was conducted under three stages. In the first stage the students of both groups under treatment were given instruction about the treatment to be given to them and administered a pre-test in English grammar and the scores were tabulated. In the second stage experimental group was taught by adopting instructional media cum demonstration method while the control group was taught by using the conventional method of using text book cum lecture method. In the third stage the students of both groups were again administered a post-test.

Statistical techniques used

Following statistical techniques were employed to analyze the data.

To find out the nature of the data, the measure of central

tendency, central dispersion and standard deviation (SD) were employed.

To find out the significant difference between the two means 't' ratios were calculated.

Results and Discussion

The self made achievement test was administered for the pre and post tests consisted of the four components namely lexis formation, comprehension, sentence construction and transformation of sentences. The analysis has been done component wise as well as for total scores on the grammar exercise items. The results and discussion for the obtained scores have been reported as follow.

Findings related to the first hypothesis

In order to find out the effect of instructional software on lexis formation, the data were analyzed in mean scores, standard deviation and 't' value. The significance of differences was checked at 0.05 level of significance. Before the treatment both experimental and control groups were attaining nearly equal mean scores (M = 29, 29.45) for the grammar item lexis formation. The calculated t value is 0.3 which is not significant at the acceptable level of confidence. It means both the groups were more or less same in lexis formation. But after the treatment, it was found that experimental group students were achieving higher mean scores (M = 34.25) in comparison to control group students (M = 24.15). The computed 't' value is 7.1 which is significant at .05 level of confidence. Hence the first hypothesis (There is no significant difference between the students taught through instructional media and the students taught through conventional method in the learning of lexis formation) is rejected.

It means that students who trained using instructional media performed better on lexis formation than those who exposed to conventional method. The instructional media helped them to get more words and formative ideas for the grammar option lexis formation. Students in free and fair climate comprehend more learning materials and the instructional program helped them to pick up more words in a particular situation where they tried more options to attain a satisfactory level. This indicates that there is an effect on students' achievement attributed to the stream of study.

Findings Related to the Second Hypothesis

To find out the effect of instructional software on comprehension, the data were analyzed in mean scores, standard deviation and 't' value. The significance of differences was checked at 0.05 level of significance. It is evident from the analysis that both groups were attaining nearly equal mean scores (M = 26, 25) for the test item comprehension. The 't' value is 1.83 which is not significant at the acceptable level of confidence. It means both groups were more or less same in comprehension before the treatment. But after the treatment it was found that experimental group students were achieving high mean scores (M = 35) in comparison to conventional group students (M = 29). The computed 't' value is 2.68 which is significant at the .05 level of confidence. Hence the second hypothesis (There is no significant difference between the students taught through instructional media and the students taught through conventional method in the learning of comprehension) is rejected.

It indicates that students of instructional media performed significantly better in comprehension test than the students taught through conventional method. This may be due to the dialogues and conversation in the actual situations exposed to the students through instructional media which helped to have better conversation practices.

Findings related to the third hypothesis

To ascertain the effect of teaching by instructional program and conventional method of teaching on sentence construction, the related data were analyzed in terms of mean scores, SD and 't' value. It was found that before the treatment both experimental group and control group were obtaining nearly equal mean scores for making Sentence construction (M = 28, 29). The calculated 't' value 0.3 which is not significant at the acceptable level of confidence. But after the treatment it is found that students instructed through instructional media were attaining higher mean scores (M = 34) in comparison to the mean scores (M = 24) of the students of control group. The calculated 't' value is 7.1 which is significant at .05 level of confidence. Hence the hypothesis (There is no significant difference between the students taught through instructional media and the students taught through

conventional method in the learning of construction of sentences.) is rejected.

It denotes that students taught through instructional media performed significantly better on comprehension making than their counter parts. It may be due to the exposure they obtained in their democratic class room climate where students attained their standards without fear and hesitation. They are motivated at large to put forward their maximum efforts in constructing sentences. It enabled them to come forward with their ideas and vocabularies.

Findings related to the fourth hypothesis

To ascertain the effect of teaching by instructional program and conventional method of teaching on transformation of sentences the related data were analyzed in terms of mean scores, SD and 't' value. It was found that before the treatment both experimental group and control group were obtaining nearly equal mean scores for making transformation of sentences.(M = 26.21, 25.47). The calculated 't' value is 0.67 which is not significant at the acceptable level of confidence. But after the treatment it is found that students instructed through instructional media were attaining higher mean scores (M = 36) in comparison to the students of control group (M = 27). The calculated 't' value is 6.61 which is significant at .05 level of confidence. Hence the hypothesis (There is no significant difference between the students taught through instructional media and the students taught through conventional method in the learning of Transformation of sentences) is rejected.

Discussion of the findings

The results showed that there are statistically significant differences in the achievement mean scores of the subjects of the experimental group who studied the grammar items through computer instructional program and the control group who studied the same grammatical items using conventional method. This difference was in favour of the experimental group. A quick survey on the students scores of the pre-test shows that there were no statistically significant differences between the mean scores of the experimental group and the control group.

The results indicate that both groups had the same background concerning their knowledge of the grammatical items before implementing the experiment.

This is an indication that both groups were equivalent in this regard. When the mean scores of the post-test were observed, it indicated that the achievement in the post-test for both groups is attributed to the treatment. It is highly noticed that the extra gain in the experimental groups mean scores are higher than the mean scores of the control group. This improvement is attributed to the method employed and the use of the computer software program has noticeably enhanced the abilities of the students of the experimental group regarding the four grammar items.

The effect of using computer for teaching English grammar is that computers enable each individual to work according to their own pace and style of understanding concepts. It is possible for the learners to use program whenever he wants at any place. Moreover the student may move freely from one component to another as he wishes according to his needs and interest. The computer method unlike the traditional method enables the learner to get feedback easily. Students thinking and attention is elicited while using computer and the student gets the chance of using many scenes during the learning process. The visual impact of the computers play a vital role in understanding the concepts. The use of the computer screen which is accompanied by animation, pictures, colours, music and sounds attract students attention and empowers retention to them. Computer instructional programs are interactive. Learners can easily go forward or backward according to their needs and requirements.

Individual difference in learning is highly considered in computer instructions which enable the students to learn at their own pace. Software programs inspire students, giving them personalized direction, for keeping them fruitfully occupied and creatively active for inculcating in them the ethos of self- discipline. It develops self confidence for channelizing their activities into creative paths for providing opportunities of introspection, for developing, arguing and for arriving solutions on their own in the teaching and learning situations.

The researcher believes that students can learn more efficiently and effectively on their own with additional resources like software programs make available in the field of education and practice it by "Learning by Doing".

Educational Implications

Based on the findings discussed above, the researcher suggests the following implications.

- Computer Assisted Instructions can be considered as a highly desirable method for teaching English grammar. Programs help students to carryout active learning activities which helps them develop their potentials.

- Researchers should conduct other studies on the effect of computerized programs on the students achievement in English language grammar focusing on other grammatical items in other areas.

- The use of software programs in language teaching should be investigated further and other components of the English language can be focused.

- Teachers are advised to use different methods, techniques, ways and modes of teaching according to their students needs and interests.

- Teachers are also advised to use the computerized methods more intensively and frequently.

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