EFFECT OF CAI ON LEARNING ENGLISH GRAMMAR AMONG ADOLESCENT STUDENTS WITH HEARING IMPAIRMENT

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ABSTRACT

Deafness often leads to linguistic problems. Difficulties manifest themselves most obviously in written work, where mistakes may be found with sentence structure, verb, tenses, word omissions etc. To exacerbate the problem, carrier language, all those words which tie language together (it, them, and, with etc.), is often hidden in fluent speech and therefore impossible to lip-read.

For the present study 15 boys and 5 girls adolescent students with profound hearing impairment age group about 16 to 18 years were selected randomly under experimental group who are in higher secondary level and follow English grammar skills in traditional method of teaching in the regular class room instructions. A single group pre-test and post-test design was used for the study. The intervention was given for 3 weeks. Each week imparted grammatical exposure like Articles, Prepositions and Tenses respectively through Computer Assisted Instructions. The findings of this research clearly indicate that most of the students with hearing impairment feel comfortable about the computer-assisted instruction. Computer assisted instruction can increase their interest in learning English grammar, and are willing to continue using them.

Keywords: Computer Assisted instruction, English Grammar, Hearing Impairment.

INTRODUCTION

In today's global world, the importance of English cannot be denied and ignored since English is the most common language spoken everywhere. With the help of developing technology, English has been playing a major role in many sectors including medicine, engineering, and education, which is the most important arena where English is needed. Particularly, as a developing country, India needs to make use of this world-wide spoken language in order to prove its international power.

The second and important reason, for English to be the medium of instruction in the Indian higher education system. It enables students to communicate with the international world. For example, the Internet is the largest source in the world, based on English knowledge and information. Also, most of the software such as "Windows", "Microsoft Office", "Internet Explorer" are firstly written in English, and these programs are the basic vital things for communication over computer. Even in a little research about something, one need of these programs and the Internet to find necessary sources and information.

It is well recognized that hearing is critical to speech and language development, communication, and learning. Children with listening difficulties due to hearing loss or auditory processing problems continue to be an under identified and underserved population. The earlier hearing loss occurs in a child's life, the more serious the effects on the child's development. Similarly, the earlier the problem is identified and intervention begun, the less serious the ultimate impact.

The study will primarily be aimed to impart the grammatical exposure in English language through computer assisted instructions to intermediate students with hearing impairment. As the students with hearing impaired lack of communication skills more over they used to communicate through their language of sign. In these contexts, hearing impaired students unable to enhance their written language skills with proper grammar rules. They need to be given a good practical exposure which may not be possible in conventional method of instructions.

Oobjectives of the study
- To find out the effectiveness of Computer Assisted Instructions (CAI) on learning English grammar among intermediate students with hearing impairment.
- To compare the performance of intermediate students with Hearing impairment in learning English grammar received through conventional method of instructions and computer method of instructions.

Hypothesis formulated for the study

- There will be a significant difference between conventional method and computer assisted instructional method to rectify the grammatical errors in Articles, Prepositions and Tenses in English language.
- There will be a significant difference between conventional method and CAI in learning of English grammar.

Methodology

For the present study 15 boys and 5 girls adolescent students with profound hearing impairment age group about 16 to 18 years were selected randomly under experimental group who are in higher secondary level and follow English grammar skills in traditional method of teaching in the regular class room instructions. Initially the researcher administered a Pre-test on English grammar in prepositions, tenses, and articles were taken for randomly selected profound hearing impaired students and scored their marks.

To see the effective performance, later the researcher introduced teaching through Computer Assisted Instruction instead of following traditional method of teaching to follow the English grammar skills. After giving thorough instructions through computer assistance on English grammar, the researcher administered a post-test to assess the effective performance in the English grammar of the hearing impaired students. Pre- test and Post- test was consisted of objective type questions in which the researcher was allotted each 10 marks for prepositions, articles, and tenses respectively.

The researcher used PEBBLE English grammar high school basics C D ROM, which contains articles, tenses and prepositions to instruct the students through computer. The researcher was instructed the students' tenses for a week period of time, articles for a week period of time and prepositions for a week period time. After giving thorough instructions through computer assistance the students were administered the post-test, which was designed in an objective format. The researcher allotted 10 marks questions for prepositions, articles and tenses respectively.

A single group pre-test and post-test design was used for the study. The intervention was given for 3 weeks. Each session was about 50 minutes of time. The performances of the particular grammar exercises were recorded time to time to analyze the data Mean, Standard deviation and 't' test was to test the hypothesis.

RESULTS AND FINDINGS
Distribution of Mean, S.D, and 't' value of students Pre-test and Post-test performance in learning Articles in English grammar

The below graph shows that, pre test mean is 4.500, S.D. is 1.235 and post test mean 7.300, S.D. is 1.081. And calculated paired-value is 8.04 which are greater than table value (2.093) at 5% level of significance with 19 degrees of freedom.
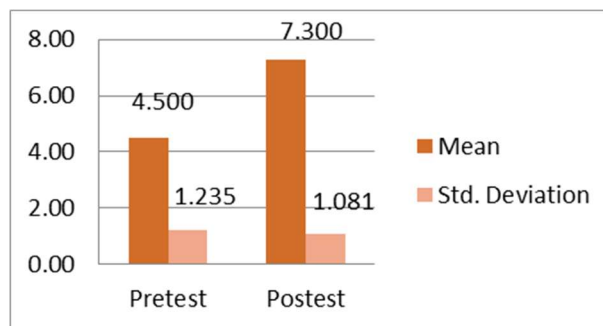

Fig.No.1

The Fig.No.1 depicts that post test score is increased in Articles.

Distribution of Mean, S.D, and 't' value of students Pre-test and Post-test performance in learning Preposition in English grammar

The below graph shows that, pre-test mean is 3.700, S.D. is 1.593 and post test mean 6.350, S.D.is 1.182. And calculated paired-value is 7.266 which are greater than table value (2.093) at 5% level of significance with 19 degrees of freedom.
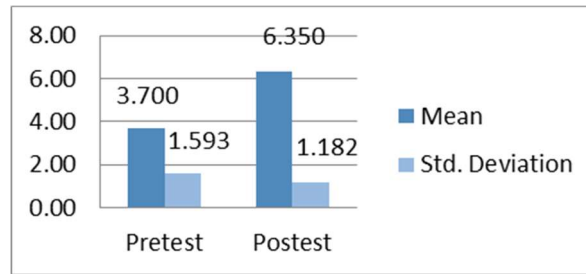
Fig.No.2

Fig.No. 2 clearly indicates that post test score is increased in Preposition.

Distribution of Mean, S.D, and 't' value of students Pre-test and Post-test performance in learning Tenses in English grammar

The below graph shown that, pre test mean is 3.250, S.D. is 1.552 and post test mean 6.100, S.D. is 1.334. And calculated paired-value is 8.517 which are greater than table value (2.093) at 5% level of significance with 19 degrees of freedom.
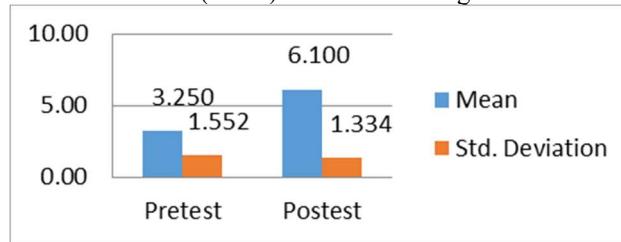

Fig.No.3

Fig.No. 3 is evident that post test score is increased in Tenses, means our program is effective.

Distribution of Mean, S.D, and 't' value of Students Pre-test and Post-test overall performance in English grammar

The below graph shown that, pre-test mean is 10.450, S.D. is 3.900 and post test mean is 20.600, S.D. is 3.872. And calculated paired-value is 25.427 which are greater than table value (2.093) at 5% level of significance with 19 degrees of Freedom.
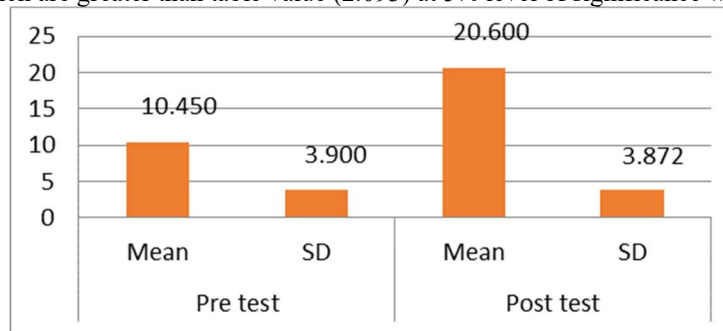

Fig.No.4

The fig.no.4 is clearly indicated that there is a significant difference between pre-test and post-test mean scores. It shows that, Computer Assisted instruction is more effective in learning English grammar.

CONCLUSION

As students with hearing impairment has very poor language skills and unable to construct the proper usage of grammatical formation, so computer assisted instruction is very suitable for them to improve the grammatical skills and enhance concentration level to learn the grammatical language. According to the findings and discussion, overall experience was given that computer assisted instruction was far better than conventional method in teaching English grammar to the hearing impaired students. The findings of this research clearly indicate that most of the students with hearing impairment feel comfortable about the computer-assisted instruction. Computer assisted instruction can increase their interest in learning English grammar, and are willing to continue using them.

The research report that emerges from the analysis of data and from the researchers observation of the students with hearing impairment is that these respondents have the potential of building up their grammar skills if they are provided with effective digitalized materials for them to use either on campus or at home.

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