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EFFECTIVENESS OF COMPUTER MEDIATED LEARNING ON ACHIEVEMENT

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ABSTRACT:

The aim of the study is to find out the effectiveness of computer mediated learning on achievement in English grammar among students of class VIII. Experimental method was followed in the present study. The data was collected using achievement test in English grammar from the selected sample of 45 (control group - 25, experimental group - 20) students of class VIII from government higher secondary school, Poongudi, Trichy through purposive sampling technique. The obtained data were analyzed by using the

statistical techniques like Mean, SD and t-test. Results found that the level of achievement in English grammar among experimental group students is high and the experimental group ("male and female" and "rural and urban") students are having higher level of achievement in English grammar than the control group (male and female) students.

KEYWORDS: Achievement in Science, IX Standard Students, Science Lab Equipment.

INTRODUCTION

Technology has become very important in human life at the present time. Technology proves to change the less developed characteristics of the countries by changing their cultural and social structures. Therefore, the knowledge which provides appearing and the advance of the technology has been key for development and improvement. Teaching all levels of the educational process, the quality and efficiency of the radical improvement of the education system open to ensure the

construction of each individual to choose the path of education to the right of sale. Education information implies modern information technologies in the process.

Nowadays, information technologies have penetrated into almost all spheres of educational fields. This fact is connected with a permanent widening of abilities of World Wide Web on the one hand, and makes it possible to place any important information concerning education on its vast majority of servers. On the other hand the usage of modern means of telecommunications by students/pupils in the learning process, results in creation of new forms of teaching, without which

it is impossible to solve constantly increasing range of educational tasks.

As further improvement on the interactive usage and application of the computer to facilitate both student and teacher learning, educationists have been analyzing the trend of using the computer to enhance leaning more effectively by serving as mediation in the learning process. The term Computer Mediated Learning (CML) is more recent in its parlance in educational technology. With the use of computer technologies in many fields, CML has been playing an increasingly

important role in the teaching of English.

CML can be defined as 'learning that occurs with the computer as the intermediate mechanism between the teacher and the pupil', and 'mediate' means to effect or convey as an intermediate agent or mechanism'. Competent teachers, schools having poor or no facility of teaching aids, etc.

CML is one example where programmed instruction has been combined with powerful media and technology to produce expensive and impressive learning systems. CML is based on the same principles as the ordinary programmed instruction but students work from computer output, instead of programmed textbooks or workbooks. This great change has brought forth a fresh perspective in the use of computers in the teaching-learning process. The recent advancement in information technology innovations and computer usage is rapidly transforming work culture and teachers cannot escape the fact that today's teaching must provide technology-supported learning.

NEED FOR THE STUDY

In order to achieve skills in English, the language teaching should include different methods of teaching. The main innovations are to be connected with the use of interactive teaching methods. Interactive teaching enhances easy way of understanding the concepts as it makes the students to come to class with great interest. It includes various activities like work sheets, on line quiz etc. To make students to take active part in learning, teachers must create a special environment. It is very much needed for the middle school children to learn the basic grammar as they go to high school. Now a day's ICT plays an important role to enhance the quality in teaching and learning. Specific softwares have been designed by the experts with so many sophistication in the software. Now days the teachers and students have started to utilize it. The investigator is interested in this juncture to know the extent of utilizing the software an achievement. Hence, the investigator is interested to take up this topic for doing research.

OBJECTIVES OF THE STUDY

- To find out the level of significant difference in pre-tests and post-test mean achievement scores on the English grammar among the control and experimental group students of class VIII with respect to gender and locality.
- To find out the level of gain scores analysis of the control and experimental group of students of class VIII with respect to gender and locality.

HYPOTHESES

1. There is no significant difference in pre-tests and post-test mean achievement scores on the English grammar among the control and experimental group students of class VIII with respect to gender and locality.
2. There is no significant difference between gain scores analysis of the control and experimental group of students of class VIII with respect to gender and locality.

METHODOLOGY

The present study belongs to experimental research. CML material was the independent variable and achievement in English grammar was the dependent variable in the study. The purposive sampling technique was USED in this study. The size of the sample was totally 45 students from control group - 25 and experimental group - 20 of standard VIII, Government Higher Secondary School, Poongudi, Trichy.

DEVELOPMENT OF CML SOFTWARE ON ENGLISH

The investigator experienced with CML had clearly indicated the distinct significant difference of CML in teaching of English over traditional teaching methods. The materials have been designed by the investigator herself and was exclusively designed based on the needs of the students where the investigator worked. The support of CML by School Net India for provision of appropriate Multimedia

effects like sound, animation and color and appropriate branched programming facilitate the tutorial mode effectively.

The CML has been developed based on the Self Instructional Mode and on Norman Crowder's model of Branching Programmed Instruction. In branching programs there are frames of teaching material. Each frame will contain two or three related ideas and a multiple-choice question with a few alternative answers is presented from which the student must choose the answer which the student thinks is the correct one. Depending on the choice which has been made, the student is directed to the next frame. Thus if the student chooses incorrectly, the student is taken to a 'remedial' frame on which the particular mistake is explained.

The concept under consideration is explained again using new examples. If needed, the correct information to be learned may be repeated i.e. the student is sent back to the original frame to make another attempt at choosing the right answer. But if the student chooses correctly he is taken to the next frame in the main teaching sequence.

The investigator developed the software using Visual Basic package with the support from M/S SCHOOL NET, Bangalore that had signed an MOU with the School on Technology support. The investigator along with the Head of the Computer Science Department of Sishya School, Hosur, in which the investigator works, along with the technical experts from M/S SCHOOL NET, specifically discussed the software design for the topics selected from English Grammar for Standard VIII. Tutorial mode was used in the software.

TOOLS

The present study belongs to purposive sampling technique. As a validated achievement test was not readily available, the investigators developed a tool to measure the achievement of the students in the present study. To prepare the Achievement Test in English Grammar (ATEG) the investigator referred to many books in English Grammar such as Interactive Integrated Grammar by the CBSE, New Delhi for Class IX, Grammar for Class VIII by NCERT, New Delhi, Wren and Martin Grammar by Sultan Chand Publications. Suggestions made by Ross, C.C (1954), Dececco and Crawford (1967) for the construction of multiple-choice items were followed in developing the test items. Since the investigator carefully avoided giving unintended clues to the correct answer and repetition of words in the options. The investigator selected the four units (95 items) for the experimentation which were common to both the Experimental and Control Group.

Table 1: t-values between the Pre-test Mean Scores on the Control and Experimental Group Students with respect to their Gender

Category		N	Mean	SD	t-value
Male	Control Group	12	32.80	6.86	1.93**
	Experimental Group	9	33.56	6.92	
Female	Control Group	13	34.73	7.42	0.15**
	Experimental Group	11	35.18	7.14	

***Not Significant at 0.05 Level.*

Table-1 shows that the 't' values, 1.93 and 0.15 are not significant at 0.05 Level. The result shows that there is no significant difference between the Pre-test Mean Scores on the Control and Experimental Group Students with respect to their Gender. Hence, the framed null hypothesis is found to be accepted.

Table 2: t-values between the Pre-test Mean Scores on the Control and Experimental Group Students with respect to their Locality

Category		N	Mean	SD	t-value
Rural	Control Group	13	33.17	7.21	1.53**
	Experimental Group	15	37.47	7.63	
Urban	Control Group	12	35.00	6.84	1.08**
	Experimental Group	05	39.00	7.01	

***Not Significant at 0.05 Level.*

From Table-2, the t-values, 1.93 and 0.15 are not significant at 0.05 Level. The result shows that there is no significant difference between the Pre-test Mean Scores on the Control and Experimental Group Students with respect to their Locality. Hence, the framed null hypothesis is found to be accepted.

Table 3: t-values between the Post-test Mean Scores on the Control and Experimental Group Students with respect to their Gender

Category		N	Mean	SD	t-value
Male	Control Group	12	56.67	5.89	9.10*
	Experimental Group	09	79.17	5.20	
Female	Control Group	13	56.87	5.70	8.29*
	Experimental Group	11	74.95	4.84	

**Significant at 0.05 Level.*

Table-3 depicts that t-values, 9.10 and 8.29 are significant at 0.05 Level. The Experimental Group (Male and Female) Students are having higher level of Achievement in English Grammar than the Control Group (Male and Female) Students. Hence, the framed null hypothesis is found to be rejected.

Table 4: t-values between the Post-test Mean Scores on the Control and Experimental Group Students with respect to their Locality

Category		N	Mean	SD	t-value
Rural	Control Group	13	55.52	5.48	9.99*
	Experimental Group	15	76.08	5.37	
Urban	Control Group	12	58.13	5.78	7.08*
	Experimental Group	05	79.15	4.97	

**Significant at 0.05 Level.*

Table-4 reveals that the t-values, 9.10 and 8.29 are significant at 0.05 Level. The Experimental Group (Rural and Urban) Students are having higher level of Achievement in English Grammar than the Control Group (Rural and Urban) Students. Hence, the framed null hypothesis is found to be rejected.

Table 5: t-values between the Gain Scores on the Control and Experimental Group Students with respect to their Gender

Category	N	Mean	SD	t-value
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Male	Control Group	12	23.44	7.04	3.95*
	Experimental Group	09	38.08	9.27	
Female	Control Group	13	22.08	8.31	5.11*
	Experimental Group	11	39.77	8.57	

**Significant at 0.05 Level.*

From Table-5, the t-values, 3.95 and 5.11 are significant at 0.05 Level. The Experimental Group (Male and Female) Students are having higher level of Achievement in English Grammar than the Control Group (Male and Female) Students. Hence, the framed null hypothesis is found to be rejected.

Table 6: t-values between the Gain Scores on the Control and Experimental Group Students with respect to their Locality

Category		N	Mean	SD	t-value
Rural	Control Group	13	22.37	8.20	5.08*
	Experimental Group	15	38.63	9.58	
Urban	Control Group	12	33.13	7.24	4.62*
	Experimental Group	05	40.15	5.97	

**Significant at 0.05 Level.*

Table-6 indicates that the t-values, 5.08 and 4.62 are significant at 0.05 Level. The Experimental Group (Rural and Urban) Students are having higher level of Achievement in English Grammar than the Control Group (Rural and Urban) Students. Hence, the framed null hypothesis is found to be rejected.

FINDINGS OF THE STUDY

Control and Experimental Group Pre-Test Analysis

- There is no significant difference between the Pre-test Mean Scores on the Control and Experimental Group Students with respect to their Gender.
- There is no significant difference between the Pre-test Mean Scores on the Control and Experimental Group Students with respect to their Locality.

Control and Experimental Group Post-Test Analysis

- The Experimental Group (Male and Female) Students are having higher level of Achievement in English Grammar than the Control Group (Male and Female) Students.
- The Experimental Group (Rural and Urban) Students are having higher level of Achievement in English Grammar than the Control Group (Rural and Urban) Students.

Control and Experimental Group Gain Scores Analysis

- The Experimental Group (Male and Female) Students are having higher level of Achievement in English Grammar than the Control Group (Male and Female) Students.
- The Experimental Group (Rural and Urban) Students are having higher level of Achievement in English Grammar than the Control Group (Rural and Urban) Students.

EDUCATIONAL IMPLICATIONS

Computer Mediated Learning (CML) is more advanced and it facilitates both teaching and learning in a better way. This study has also brought out the superiority of experimental group than the controlled group, confirming the need of CML. With the use of computer technologies in many fields, CML has been playing an increasingly important role in teaching of English. Hence the teachers may be asked to use the CML software while teaching English grammar. Teachers may be given orientation regarding the awareness about the nature of CML and operational techniques of the computers. A

computer technician may be appointed and asked to supervise the schools to know the problems of the teachers in administering the CML software. The Headmasters should also be given orientation towards the potentiality of CML and they should be instructor to encourage the teachers to use the computers and soft wares frequently for the students.

CONCLUSION

It is the responsibility of the teachers to make use of the computers for teaching learning process. Not only the English teachers but all the teachers of all disciplines should get interest and involvement to know the operational techniques of the computer and utilization of software at the appropriate time of the teaching content in the classrooms. The teachers must have thirsty in operation of the system and utilizing the special features of the computers. By doing this, the quality in education will automatically extend to the higher level.

REFERENCES

1. Anandan, K. & William Dharma Raja, B. (2010) Educational Technology. APH Publishing Corporation, New Delhi.
2. Anandan, K. (2010). Instructional Technology in Teacher Education. APH Publishing Corporation, New Delhi.
3. Anandan, K. (2004). Use of Internet in Education, New Frontiers in Education. International Journal of Education Journal, Vol. XXXIV, No.4.
4. Ahmet Hakan Hançer & Ahmet Türker Tüzemen. (2008). A Research on the Effects of Computer Assisted Science Teaching. World Applied Sciences Journal, 4(2), 199-205.
5. Darejan Geladze. (2015). Using the Internet and Computer Technologies in Learning/Teaching Process. Journal of Education and Practice, Vol. 6, No.2.
6. Jyoti Bhalla. (2013). Computer Use by School Teachers in Teaching-learning Process, Journal of Education and Training Studies, Vol. 1, No. 2.
7. Salih Usun. (2006). Applications and Problems of Computer Assisted Education in Turkey. The Turkish Online Journal of Educational Technology (TOJET), Vol. 5, Issue 4.