

Effectiveness of Computer Assisted Instruction on the learning of English Language

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ABSTRACT

Computer Assisted Instruction comprises all forms of electronically-supported learning and teaching. This study is primarily concerned about how much the multimedia technologies, especially Computer Assisted Instruction influences the achievement in English Language. The researcher is interested in examining the effectiveness of Computer Assisted Instruction on students' achievement in English Language at high school level. Computer Assisted Instruction Package and Achievement Test in English Language were the tools used to collect the data for this study. Experimental research method was adopted for the study. 100 students were selected as a sample by using randomly sampling technique. Mean, Standard Deviation and 't' test were the statistical techniques employed to analyze the data. The result indicates that the effectiveness of Computer Assisted Instruction on achievement in English Language is higher when compared to traditional method.

INTRODUCTION

In computer-assisted instruction, there is flow of information and interaction between the computer and the learner. The computer delivers instructions directly to students and allows them to interact with it through the lessons programmed in the system. A computer provides feedback to the learner on the basis of his/her performance. On the whole it may be said, that the computer acts as a teacher to the student. In order to carry out this teaching/learning function, a computer utilizes various instructional modes.

Education is about teaching, learning skills and knowledge. Education also means helping people to learn how to do things and encouraging them to think about what they learn. It is also important for educators to teach ways to find and use information.

Through education, the knowledge of society, country, and of the world is passed on from generation to generation. In democracies, through education, children and adults are supposed to learn how to be active and effective citizens.

The role of education is the most important factor in the development of a nation. The remark made by the Kothari Education Commission (1964-66). "The destiny of India is being shaped in the classrooms" throws light on the important of education in modern India. Today we are in a technology revolution. The progress in science and technology has changed the role of education. The role of teacher has also changed due to techno era. Now she became a smart teacher to be vigilant about self reflection, commitment to putting the right things on right time and she shake the minds of others and encourage them to learn by creating a safe environment for all opinions. The paradigm shift in the field of education is from teacher-centric to learner-centric; the paradigm of the prospective teacher

is viewed primarily as a passive recipient of this professional knowledge and place little part in determining the substance and direction of his or her preparation program. In student centered learning also known as learners' centered education broadly encompasses methods of teaching that shift the focus of instruction from the teacher to the students. Students centered instruction focuses on skills and practices that enabled lifelong learning and independent problem solving.

An appropriate educational technology in the hands of competent teachers can ensure a better teaching-learning process. Teaching and learning are the most important process in our educational system. Learning is the process of changing behavioral tendencies of the learner. The method of teaching differs from teacher to teacher, their aim is to reach the goals. For this purpose, teachers use various techniques, plans and strategies, which can match the objectives of teaching, as well as, those of pupil's learning. The teacher can select and use various techniques whenever and wherever required.

The use of such technology in the institutions will motivate the teaching community and create better learning conditions. Hence, keeping all these in view the researcher attempted an experiment to apply Computer Assisted Instruction in English Language at high school level.

A computer has several applications in instructional situations. It is used to find the entry level of students' knowledge on enrolment. It is also used to plan and individualized programmes, monitor a student's progress and compile tests and scores. But the most important contribution of computer in the domain of instruction is Computer-Assisted Instruction (CAI) and Computer-Managed Instruction (CMI).

In computer-assisted instruction, there is flow of information and interaction between the computer and the learner. The computer delivers instructions directly to students and allows them to interact with it through the lessons programmed in the system. A computer provides feedback to the learner on the basis of his/her performance. On the whole it may be said, that the computer acts as a teacher to the student. In order to carry out this teaching/learning function, a computer utilizes various instructional modes.

Scope and Significance of the Study

Computer Assisted Instruction helps the learners to understand the language quickly. They can learn the language very easily with their own pace and independently without the help of their teachers. It provides the opportunity for self-learning. Computer Assisted Instruction can be used -

- to test the ability to comprehend the subject taught clearly
- to increase the students' ability in recognizing written forms of language
- to enable the students to know the spelling and pronunciation of each words

The students can read English with greater comprehension. Visual effects, sounds, etc can also be produced with the help of multi-media effect. In general, students can learn well with computer in considerably less time.

We use CAI to conduct proficiency test for students, which help them to answer the questions and finally they will get their score and they can evaluate themselves. Also, they can get the answers immediately after getting the score. This helps the students to develop their knowledge as well as they can have self-correction. We train the students by giving sounds of different words. This helps them to understand pronunciation better. This helps the students understand the concept of the language easily. Also, it helps the students to develop the listening skill which is considered to be the first in LSRW.

Computer Assisted Language Learning (CALL) grew out of the field of Computer Assisted Instruction (CAI) and draws on other related fields such as Educational Psychology, Artificial Intelligence (AI), computational linguistics, instructional design, Human Computer Interaction (HCI) and SLA (Second Language Acquisition). More recently, it has been impacted by developments in the field of WBI (Web Based Instruction). Indeed, there is a lot of crossover between CALL programs and WELL (Web Enhanced Language Learning) programs.

The significance of the study is as follows:

- CAI create interest for learning in students
- These classes are helpful in concentrating pupil's attention.
- It is a time saving method because it explains the idea easily and precisely
- It presents the knowledge in the concrete form.
- Students acquire the knowledge by doing themselves which makes definite and stabilized
- It stimulates various sense organs and makes the students active in the class.
- It reduces the burden of the teacher and makes teaching more effective and impressive

Objectives of the Study

- i) To develop suitable Computer Assisted Instruction Package for the selected topics in English Language at high school level.
- ii) To develop suitable Achievement test for the selected topics in English Language at high school level.
- iii) To validate the Computer Assisted Instruction Package for the selected topics in English language at high school level.
- iv) To validate the Achievement the achievement test for the selected topics in English Language at high school level.
- v) To examine the effectiveness of CAI on pupils' achievement in English Language at high school level.

Hypotheses of the Study

- i) There would be no significant difference between the Pretest and Posttest Mean scores of the achievement in English Language of the experimental group and the control group.
- ii) There would be no significant difference between the Posttest Mean scores of the achievement in English Language of the experimental group with respect to gender.
- iii) There would be no significant difference between the Posttest Mean scores of the achievement in English Language of the experimental group with respect to parents' income.

Methodology

Tools Used

Effectiveness of evaluation largely depends upon the accuracy of measurement. Accuracy of measurement in turn depends on the precision of the instrument or tool. The tool is of many types. The researcher has selected the following tools and used them to collect the data for this study.

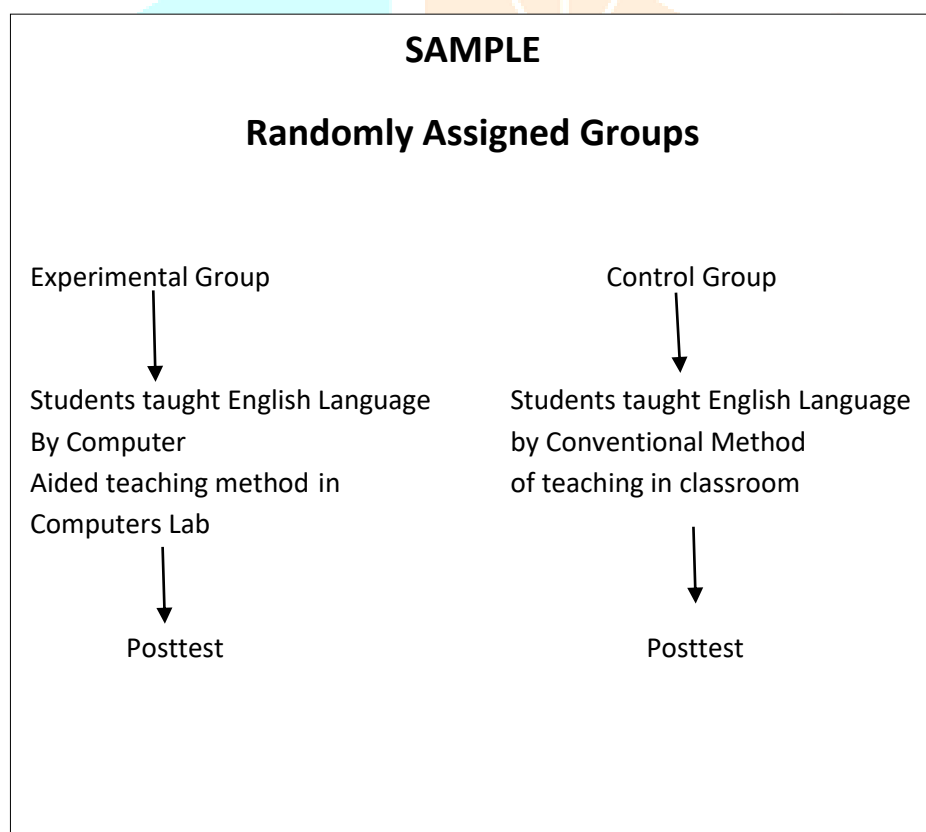
- i) Computer Assisted Instruction package for the unit of 'Parts of Speech' in English Language of Standard IX.
- ii) Achievement test in English was constructed and standardized by the researcher.

Research Procedure

In the present study, Experimental research method was adopted for its suitability and accuracy. Two groups of students, namely the experimental and control group were taken for the study. The control group was taught through conventional method of teaching and Computer Assisted Instruction Package was used for teaching the experimental group.

Sample

The sample selected for this experiment was random sampling. The 50 pupils studying IX standard in Adarsh Higher Secondary School, Raipur, Raipur-District, Chhattisgarh were treated as experimental group and the 50 pupils studying IX standard in Adarsh High School, Raipur, Raipur-District, Chhattisgarh were treated as the control group.



To find out the difference in the effectiveness of learning through Computer Assisted Instruction Package and through conventional method, the researcher adopted the two groups –Pre-test/Treatment: Post-test experimental design.

Statistical Techniques

The data obtained were analyzed by using appropriate statistical techniques such as Mean, Standard Deviation, t-test.

Finding of the Result

It is inferred from Table 1 that the computed value of 't'(1.53) between the experimental group and control group with respect to their Pretest is less than the critical values of 2.63 and 1.98 at 0.01 and 0.05 level of significance. Hence, it is not significant. Consequently, the null hypothesis is not to be rejected and it can be said that there is no significant difference between the Pretest Mean scores of the achievement in English Language of the experimental group and the control group.

It is also inferred from the above table that computed value of 't' (9.53) between the experimental group and control group with respect to their Posttest is greater than the critical value of 2.63 at 0.01 level of significance. Hence, it is significant. Consequently, the null hypothesis is to be rejected and it can be said that, there is significant difference between the Posttest Mean scores of the achievement in English Language of the experimental group and the control group. It is also inferred that the effectiveness of Computer Assisted Instruction on achievement in English Language is higher compared to the traditional method.

Table-1 Test of Significance of Difference between Pretest and Posttest Mean Scores of the Achievement in English Language of the Experimental Group and the Control Group

<i>Pre-test</i>						
<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>df</i>	<i>'t' value</i>	<i>Level of Significance</i>
Control	50	35.24	2.43	98	1.53	NS
Experimental	50	36.88	4.36			
NS- Not Significant						
<i>Post-test</i>						
<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>df</i>	<i>'t' value</i>	<i>Level of Significance</i>
Control	50	43.74	10.12	98	9.53*	HS*
Experimental	50	60.72	7.11			

* Highly Significant.

Table-2 Test of Significance of Difference between Posttest Mean Scores of the Achievement in English Language of the Experimental Group with the respect to gender

<i>Sex</i>	<i>N</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>df</i>	<i>'t' value</i>	<i>Level of Significance</i>
Male	25	64.76	8.92	48	7.11	HS*
Female	25	55.16	4.07			

Table 2 shows that the computed value of 't' (7.11) is greater than the critical value of 2.68 at 0.01 level. Hence, it is significant. Consequently, the null hypothesis is to be rejected and it can be said that, there is a significant difference between the Posttest Mean scores of the achievement in English Language of the experimental group with respect to gender. It is concluded from the above table that the male students have achieved more than the female students.

Table 3 shows that the computed value of 't' (2.233) is less than the critical value of 2.68 at 0.01 level and greater than the critical value of 2.01 at 0.05 level. Hence, it is significant at 0.05 level. Consequently, the null hypothesis is to be rejected and it can be said that there is significant difference between the Posttest Mean scores of the achievement in English Language of the experimental group with respect to parents' income. It is concluded from the above table that the pupils whose parents' income is 60,000 and above achieved more than the pupils whose parents' income is below 60,000.

Recommendations

In the light of the study, the following areas can be suggested for further investigations.

- i) New teaching methodologies using Computer Assisted Instruction can be introduced.
- ii) Pupils may also be involved in the preparation of Computer Assisted Instruction Package should be given to the English Language teachers.
- iii) In-service courses for the preparation of Computer Assisted Instruction Package should be given to the English Language teachers.
- iv) English Language teachers should be trained to use the Computer Assisted Instruction Package effectively in the classroom.
- v) Students, who are studying English Language at high school level should be trained in using Computer and Internet.

The present study had investigated the effectiveness of Computer Assisted Instruction on students achievement English Language at high school level and it was found that the effectiveness and utilization were very high in the case of achievement in English Language. Since Computer Assisted Instruction is having effectiveness on achievement in English Language, introduction of Computer Assisted Instruction should be encouraged at high school level.

References

- Aggarwal, Y.P. (2002). Statistical Methods: Concepts, Application and computation. New Delhi, Sterling Publishers private limited.
- Best, W. John (1975). Research in Education. New Delhi: Prentice hall of India private limited.
- Bates, A.W. (1995) Technology, Open learning and Distance Education, London: Routledge.
- IGNOU (2000), Unit 10: Application to Audio/Video Programmes, ES-361; Educational Technology, New Delhi: IGNOU
- Jonassen, D. (1991) Objectivism vs. Constructivism, Educational Technology Research and Development, 39(3), 5-14 Quoted in Murphy Elizabeth (1997).
- Kulbir Singh Sidhu (2001). Methodology of Research in Education. New Delhi: Sterling Publishers Private Limited.
- Madhuri Dubey (2011). Effective Computer Assisted Instruction – Design, Development and Delivery. Hyderabad: Universities Press (India) Private Limited.

- Mangal, S.K. (1987). Statistics in Psychology and Education. New Delhi: Tata McGraw Hill Publishing Company Limited.
- Rosenberg, M.J. (2001). Computer Assisted Instruction Strategies for delivering Knowledge in the digital age. New York: McGraw Hill Publishing Company Limited.
- Ramiszowski, A.J. (1986). Developing Auto-Instructional Materials. New York: Nicholas Publishing Company.
- Kothari, C.R. (1990) Research Methodology-Methods and Techniques, 2nd Edition. Chennai: Wishwa Prakashan Publishers.
- Singhal, Meena, The Internet and Foreign Language Education: Benefits and Challenges, The Internet TESL Journal, Vol. III, No. 6, June 1997
- Sperling, Dave, The Internet Guide for English Language Teachers, Prentice-Hall Regents, 1998

