

EFFECT OF COMPUTER ASSISTED PROGRAMS ON ACHIEVEMENT OF STUDENTS

ABSTRACT

Technology has proved to be boon in present scenario in the fields of Education, Medicine, Agriculture, Games etc.,. Technology can be used as an effective means or teaching learning tools for the learners and teachers. Computers are the latest among the aids used for instructional purposes. Besides being powerful and stimulating aids, computers offer great potential for learning. Computers are effecting fundamental changes not only in the society outside the classroom walls but also within them. Computers and learning are closely inter-related and the judicious integration of both can enable students to organize and process their knowledge at the touch of keyboard button. This innovative approach to learning, which is a variation from the conventional classroom based- instruction, has been yielding exciting and rewarding results in teaching.

A number of studies have established the computers as an effective tools in teaching and learning process. Numerous investigators have put emphasis on the effectiveness of computer assisted programmes in various subject areas and in various localities. Now the matter is to see up to what extent this innovation is promising in Indian scenario too.

INTRODUCTION

Technology can be used as an effective teaching tool for English language learners. In present scenario, computers have been proved wonder in developing educational aspects. Education has been the pioneer of the society. It is a life long pursuit & and uninterrupted continuum. Teaching students to be literate is a vital educational priority in India. Therefore this area is one of our greatest priorities. It is also one of our greatest challenges. It can be seen with the passage of time classroom environment modifies and adopts the demands the time. As this is an Era of technology and our education system is becoming Hi-tech. Technology made the education system easy and complicated too.

Technology is becoming a visible part of today's lives. Even In rural area technology advances the standard of living and daily living skills and education system too. From classroom to home, computer are now an element of children learn, play and communication. Using technology to facilitate English linguistic skills among school students is one of the important aspects for child's development. As we can see there is large population in schools and if these students are being taught through computer based programs than they can bring up with good communication skills.

Students can be shown some interesting and knowledgeable videos, audio etc. So that by watching or listening them they can over come their drawbacks. Teachers face the challenges of a large population who

do not speak English and have high transient rates. Those who have taught students learning English as their second language know that any language support is helpful for their language acquisition. English language learner (ELL) students need a variety of languages experience. They need to hear language, speak language and read language.

It is believed that computers can play an integral part in providing ELL students with valuable language experiences as they learn new language in Aarohi School.

The quality of verbal interaction , vocabulary development, reading skills, writing skills, listening skills can be improve through computer based programs in Aarohi schools.

Thus it can be said that computer assisted English language learning CAELL is the application of computer in the field of English language learning in the light of cognitive, pedagogical, psychological skills.

Working with computers in a field like English language leaning is a process of endless experimentation.

The potential use of computers in educational setting go far beyond the provision of direct instruction and which has been very well used in the teaching-learning process in the developed countries. But in India which is in an embryonic stage particularly in the field of English language learning.

REVIEW OF RELATED LITERATURE

RESEARCHES IN ABROAD

This part highlights the research work done in other countries. Some of them are given below :

Dokuz (2016) studied the effect of the CAI on the achievement and attitudes of the students towards Mathematics. The research was conducted on 9th grade students from high school. the exepirical group consisted of 30 students and control group consisted of 30 students. CAI and CT were used in the experimental and control group respectively. The data was collected by using Mathematics test, Mathematics Attitudes scale. Results demonstrated that teaching Mathematics with CAI method increased student's success significantly in Mathematics lesson. However, the experimental and control groups did not differ between students' attitudes towards Mathematics.

J. Tomesko (2017) conducted research on "the effectiveness of computer assisted instructions to teach physical science" on 60 students of St. Marine Gold school of Auckland, Newzealand. researcher used self developed CAP material for teaching physical science to 2nd year graduates. he came out with the findings that students taught with computer assisted instruction have higher achievement in physical science subject than those who are taught with conventional teaching.

STUDIES IN INDIA

Vallabh J. Vakirria (2016) conducted a study on "An exploration in the teaching of language and literature for standard VIIIth through video instructional programs. The researcher developed video instructional

program and constructed a test and an optionaire for the students and teachers respectively and applied it on the sample of 40 students and 40 teachers. It was found to be very effective in the rural arrear school of people. The effectiveness of the program was found directly proportional to the level of achievement in different areas. The students and teachers were found to have positive reactions towards the video instruction program. The researcher had studied the effect of video instructional program more effective but failed to mentioned the required infrastructure and budget.

Dr. sarika sharma (june, 2017) HOD, central university of Haryana conducted her research on " role of CAI in teaching children with special needs" on sample of 20 students. she overviewed that the use of CAI in teaching reproduces higher achievement than the use of conventional teaching alone. Students learn easily, faster and with speed & pace with the use of CAI.

Computer Assisted programs (CAP)

CAP is a program of instructional material presented by means of a computer or a computer system. This is in fact a mode of instruction whereby effective use of computer is made for the purpose of content transaction. Many educational computer programs are available online and from computer stores and textbook companies. They enhance teacher instruction in several ways. Computer programs are interactive and can illustrate a concept through attractive animation, sound and demonstration. They allow students to progress at their own pace and work individually or problem solve in a group. Besides the computer programs may be used for diagnosis or assessment too.

But these programs should be selected with thorough review by the teacher. The teacher should review the computer program or the online activity or game to understand the context of the lesson and determine which ones fit the needs of their students and how they may enhance instruction.

There are many advantages of using computers in education. They provide one to one interaction with the students. Besides, an instantaneous response to answers is elicited. This way the students receive immediate feedback and it let them not to continue to practice the wrong skills. Computers capture the students' attention because the programs are interactive and engage the students' spirit of competitiveness to increase their scores and hence their level of skill acquisition. The computer programs allow students to proceed at their own pace and do not move ahead until they have mastered the skill. In addition, the computer programs also follow the psychological principal of individual differences. The computer programs provide differentiated lessons to cater the needs of all students who are at risk, average or gifted.

Computer programs are useful in almost every educational practice whether it requires drills, comprehension, practical demonstration or even evaluation. A computer program can be used diagnostically too, and once a student's problem is identified, teacher can focus on the problem area. Another significant aspect of utility of computer program in education is that it caters the psychological needs of the students

too. Because of the privacy and individual attention afforded by a computer, students are relieved of the embarrassment of giving an incorrect answer publicly or of going more slowly through the lessons than other classmates.

PRINCIPLES OF DEVELOPING CAP

Development of instructional material for CAP is based on the principles of programmed instructions. These principles helped in preparing software for CAP systematically by involving the principles of learning method as programmed instructions. so, basic principles of programmed instructions are used for developing software for CAP. these principles are as follows:-

1) principle of small steps

According to this principle, the subject matter which is to be programmed is analysed in details and then it is divided into small and meaningful parts or segments. One part or segment is presented to the learner. This part of the information is known as frame. By using this principle of small steps, the possibility of committing errors is reduced considerably. More correct responses by the learner encourage him to move ahead.

2) principle of active responding

This principle is based on the assumption that better learning is the result of active participation and responding of the learner while learning. So, a good instructional material should actively involve the learner in learning process. Active responding mean pupil's active involvement in the learning process while going through the CAP.

3) principle of immediate confirmation

This principle is based on the psychological phenomenon that learners learn best when they confirm the answers immediately after responding. Instructional material for CAP is so arranged that the learner can find out immediately if the answer is correct or wrong.

4) principle of self pacing

According to this principle, every learner makes progress at his own pace. The instructional material for CAP is so developed that it takes care of the individual differences. when learner is involved in the CAP, he need not have to move with the pace of other learners in the class. In CAP, the learner can work with each step as slowly or as quickly according to one's own pace. This principle keeps every type of learner fully satisfied as far as his speed of learning is concerned.

5) principle of evaluation

The principle of evaluation is another fundamental principle of development of instructional material for CAP. It helps the learner to learn and grasp the material given in each segment. In this principle, the learner is evaluated continuously on each segment. The purpose of this principle of evaluation is not only to test the

learner on each segment but also to evaluate the learner after completing the programme through CRT. Thus, learner's progress can be evaluated by looking into the responses given by the learner.

OBJECTIVES OF CAP IN TEACHING LEARNING PROCESS

CAP has been used as an important instructional technique. The importance and usefulness of CAP has been proved by many researchers. Some of these can be explained as follows:

1) **Creation of good learning environment**

CAP creates good learning environment as **Yigit and Akdeniz (2003)** found in their study. They found that the instructional environment created with CAP resulted in the permanent and upper level of learning with less expenses in a short time. Thus, CAP is helpful in creating the good learning environment which results in learning

2) **Supplement for traditional instruction at school level**

CAP is proved as good supplement for traditional instruction. CAP can be used in addition with the traditional method. Goode (1998) found in his study that fifth and sixth grade pupils who used CAP along with traditional method scored significantly higher in Mathematical concepts and computation than a control group of learners who used only traditional approach

3) **Supplement for lecture approach of teaching at college level**

CAP has been proved as good supplement for lecture approach of teaching also. It can be used along with the lecture method also to improve the learning level of the learners. **Tsai and Pohl (1977)** studied the effectiveness of the lecture approach and CAP on college learners. They found a significant difference when achievement was measured by quizzes or final exam scores. When professors used the lecture approach supplemented by CAP, it is more effective. The lecture approach alone was the least effective method of instruction.

4) **Increase in motivation and Reinforcement**

CAP increases the motivation and reinforcement of the learners. This was proved by Springer (1973). The study concluded by him indicated that computer appeared to be a strong motivational device for educationally disadvantaged students. Also, it broadened the scope of the scientific content that can be included in the curriculum.

5) **Helpful in quick learning**

CAP is helpful in quick learning. CAP research has generally been positive regarding the time it takes to learn the concepts. **Dence (1980)** described several studies in which learner learnt more quickly with CAP than with traditional instruction.

6) **Development of positive attitude towards self learning:**

CAP is a self learning technique. The use of CAP develops the positive attitude of learners towards self learning. Studies done by **Yu (1998) and Mitchell (2007)** revealed that the use of CAP leads to develop more positive attitude towards computers, course content and quality of instruction and self as learner than by the use of conventional instructions alone.

7) **Achievement of higher cognitive skills**

CAP is also responsible for achieving higher cognitive skills. **Panda and Chaudhary(2000)** studied the effect of computer assisted learning (CAL) In achieving higher cognitive skills. They concluded that computer assisted learning resulted in greater learning achievements in all hierarchies of cognitive domain.

8) **Reduction in time:**

The use of CAP reduces the time to be used in learning. **Fisher(1993)** reported that learners using the computers completed their work in 40% faster than when they did not have access to it. **Krein and Moholm(1990)** found that CAP reduces the time which was taken by the learners to learn the instructional material.

9) **Increase the learning ability and better retention**

CAP results in the increases in the learning ability and better retention of the learner. **Yaakub and Finch(2001)** indicated that the learners learned material faster with CAP than with Conventional teaching. Also, the learners who were taught through CAP retained the learned material for longer time than the learners who were taught through conventional instructions.

10) **Wider coverage of learners with individual differences**

The use of CAP can cover the number of individual differences. **Stern and Repa (2004)** found that CAP was successfully used to teach social skills to teens enrolled in a behavior modification program. **Dunn (2004)** also found in his study that at risk learners of high school in the CAP treatment group scored significantly higher than the control group. The study was carried out to find the effect of CAP on reading comprehension. Thus CAP has positive effect on a variety of learners.

CONCLUSION

CAP can be boon for the students in enhancing their teaching learning strategies. Students can improve their academic achievements and teachers can also inculcate in them new techniques of teaching. In order to promote the use of CAP, training should be given to develop instructional material. This step may prove helpful teachers and for students both in enhancing teaching learning process. The teacher educators should motivate in service and pre service teachers to modify their attitude towards the use of CAP in teaching learning process. CAP can improve the interest of teacher and students in the use of computer technology and making teaching learning process effective. The administrators should also arrange the workshop, seminars etc for teachers and students in order to learn how to develop CAP material and how to implement it in making classroom environment active and interesting.

References

- Chabra. Suman.(2015)** “*effect of computer assisted instructions on the achievement of pupil teachers in teaching of English language*”.Ph.D in Education, Kurukshetra University,Kurukshetra
- Dokuz, C.K.(2016)**. “*the effect of computer assisted programs on the achievement and attitudes towards Mathematics of students in Mathematics Education, International Journal of Research in computer Application & Management*”, 2(3)
- Good. C.V.** (1973). *Dictionary of Education*. **New York: Mac Graw Hill** book company
- Mahmood, M.K. and Mirza, S.(2012)** “ *effectiveness of computer assisted programs in urdu language for secondary school*”. Ph.D in Education, Language in India, www.languageinindia.com
- Sheetal.(2008)**. *Effect of CAI on academic achievement of 9th class students in Biology*”, Ph.D. Thesis Kurukshetra university, Kurukshetra.

Sharma. Sarika. (june, 2017). " *Role of CAI in teaching children with special needs*", Central university of Haryana, Mahendergarh
Tomesko.J. (2017) "*the effectiveness of computer assisted instructions to teach physical science*", West Virginia University

