Role Of Computer Assisted Instructional Materials (Caim) In Teaching-Learning

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Abstract: Today is the age of science and technology. In the field of education, computer takes a necessary place. Computer improves the students' way of thinking and problem solving. E-mail, database and other software are generally used for Computer Assisted Instruction. So, if we don't prepare the students with computer knowledge and skill, they will not be able to keep the society towards the advance future. Similarly, the CAIM has an important role in teaching-learning process to enhance the academic achievement of students. Hence this paper elaborately explains about the CAIM and its scope, importance, and uses in teaching- learning process.

I. INTRODUCTION

The education system which was evolved first in ancient India is known as the Vedic system of education. Ancient education emerged from the Vedas, because the Vedas are the source of Indian Philosophy of life. Presentation and transmission of Indian culture was one of the aims of ancient educational system.

The biggest drawback of our education system is the traditional method of teaching. To overcome this, some changes in teaching methodology should be brought.

Nowadays computers are used all walks of life. The national policy on education 1986 has emphasized that the application of educational technology to improve the quality of education at all levels. To offer such a quality education, we need certain new techniques such as CAIM.

II. COMPUTER ASSISTED INSTRUCTIONAL MATERIALS (CAIM)

Computer Assisted Instructional Materials is made up of four words i.e. Computer + Assisted + Instructional + Materials (CAIM), as the name suggests, stands for the type of instructions aided or carried out with the help of a computer. Computer is ahead of the teaching machine on account of its unlimited capacity of doing more work and multiple types of works at the same time for unlimited number of individual learners. In short about CAIM we can say that CAIM is the instructions which are given to the students with the help of computer.

According to Hilgard and Brower (1975), "Computer Assisted Instruction has now taken as so many dimensions that it can no longer be considered as simple derivative of the teaching machine or the kind of programmed learning that Skinner introduced". Thus, CAIM is the providing the instructions to the students using computer. In other words we can say that CAIM is the system of instructions in which the instructions are given by the use of computer instead of teacher or other mode as in the traditional way of instructions. Computer is the wholesome controller of all the activities in the front end. The back end of the system is controlled, designed, planned and implemented by human being who are mainly teacher, hardware and software engineers.

III. SCOPE OF COMPUTER ASSISTED INSTRUCTIONAL MATERIALS

A computer has a lot of applications in all the fields. The presence of computer cannot be ignored in any field of life. Visualization gives better aspects of understanding rather than imagination. In teaching, through CAIMs, if the subject is visualized then it becomes easier for the students to

understand. Computer gives visual form of subject matter i.e. aid of computer make education simpler and easy to learn. So, we can say that computer is the wave for education. In the last few years the number of persons using computer assisted instructional material has increased markedly and numerous articles have been written about the role of technology in education in the 21st century. Example of such materials include programmed tests, audio CD, video CD, slide kits, monographs, computer-assisted and web-based instructional materials which may be used either alone or in combination with written materials for independent learning.

IV. BASIC ASSUMPTIONS OF COMPUTER ASSISTED INSTRUCTIONAL MATERIALS

Following are the basic assumptions of computer assisted instruction material due to the characteristics of computer:

- ✓ *Instructions to large number of students:* This assumption specifies that the instructions can be given to a number of learners at a time. It can work much faster than human being. So it can handle lots of users at a time. The number can be increased by improving the hardware configurations. Internet is a live example where millions of users are handled by few machines.
- ✓ *Automatic Response Recording:* The second assumption is related to the recording of responses. The students interact with computer and they respond in this process. Whatever is their response is recorded and responded immediately and automatically. This response is then further used by the computer to provide the feedback to the students.
- ✓ *Variety in Presentations:* Computer is a multimedia equipped machine. It can have a lot of presentation styles, methods and techniques. The combination of hardware and software can generate lots of presentation styles and methods. This variety in methods and techniques is helpful in attracting the students to the system for more and more learning.

V. IMPORTANCE OF COMPUTER ASSISTED INSTRUCTIONAL MATERIAL

The following are the importance of CAIM:

- ✓ *Systematic Learning:* Computer in itself is a systematic machine. It performs the activities according to a set system of instructions. Thus the activities of computer make the learning process systematic and the learners learn according to the pre-set system.
- ✓ *Use of various senses:* The students use various senses in learning. There are all types of hardware available which are developed by keeping in mind the senses and their functioning. Multimedia approach of computer is the reason for the involvement of all the senses of learner in the system
- ✓ *Self Pacing:* Psychology says the students should move at their own speed of learning. They should not follow teacher's speed of teaching. The self pacing is provided by

the Computer Assisted Instruction. Each student on CAIM system learns its own speed.

- ✓ *Improved Accuracy Rate:* There is no doubt about accuracy rate of computer. Thus the accuracy rate of learning is increased as there are lots of chances of error in the other system of instructions. In CAIM, the human beings are kept at back end. So error rate is reduced resulting in increased accuracy rate.
- ✓ *Individualized Instructions:* CAIM system of instruction does not give the group instruction. It interacts with each and every individual separately. The students are considered as an individual not a class or group. Computer diagnoses the students and then provide him the necessary instructions. Thus learning by CAI is individualized.
- ✓ *Makes learning Interesting:* CAIM by use of variety and change in its style, methods, techniques make the study attractive and the learners take interest in the process. They are motivated at every step of learning. The interest is maintained at every step.
- ✓ *Provide Effective Feedback:* CAIM system provides immediate and varied type of feedback to the students. Thus the feedback techniques motivate the students and they keep on learning using the CAIM system.
- ✓ *Speedy Work:* The learning speed is increased in whole. It does not mean that the students are given fast instructions. When a large number of students are instructed at a time then the whole effect of system is very much large as compared to traditional classroom learning. This increase the speed of learning work.

VI. USES OF COMPUTER ASSISTED INSTRUCTIONAL MATERIAL

Computer is used in every subject today. Computer and any subject have a close relation with each other these days. Computer is useful to the students of all the subjects. The benefits of computer have introduced new modes of education. The uses of CAIM in education can be seen from following discussion.

- ✓ *Instruction of Learner:* The major aim of CAIM is to provide the instruction to the learner. This can be done in many styles. Using the concept of programmed instructions, instructions can be provided to the students. Computer assisted instructional Materials take care of individual difference and handle each student accordingly. Instructions related to any subject can be given using CAIM.
- ✓ *Drill and Practice:* Students can use the computer for solving problem related to their education. Drill and practice on computer helps the students to understand and revise the concepts. Branching style remedial program can be used. Such practice has longer life of retention.
- ✓ *Simulation:* Instructions can be given in simulation. There are various techniques available which gives a perfect real life experiences. The abstract concept or the situation where students cannot be taken can be taught using simulation techniques.

- *Tutorial and Dialogues:* Subject matter can be taught to the students in an effective way by using various apparatuses. Today students can talk to computer and listen to it. Thus they can have a dialogue with computer system related to their education. They can have the solution of their educational problems.
- *Providing Educational Guidance:* Computer can diagnose the students from every aspect and can have the whole picture of student's status. Thus with proper diagnosis it can guide the students for their education. The timely and proper guidance can lead to the students for excellent achievement in education.
- *Evaluation uses:* Evaluation is an integral part of Education. Students can be evaluated objectively and in less time by using computer. As evaluation is comprehensive term and it involves a lot of aspects. Thus computer can access all these aspects and can have the whole picture of students.
- *Vocational Guidance:* Career adjustment is a major problem in front of students. They have some time a lot of options and sometimes none. They need to be properly guided. Computer can help the students in this situation also. It can provide the information related to vocations from all around the world.
- *Upgrading Knowledge:* Computer is a vast source of knowledge. Knowledge is doubling every three years. It cannot be gained by going through books. Internet is the medium to access the knowledge. Internet helps the students to make them upgraded in every aspect.
- *Education Research:* Research has become an integral part of Education. It is helpful in improvement in the educational process. Internet is an ocean of knowledge. It provides a lot of information and instructions to the research scholar related to education. Also the findings of research can be shared using computer with no time delay. It increases the speed of improvements.

VII. ROLE OF TEACHER IN COMPUTER ASSISTED INSTRUCTIONAL MATERIAL

Computer plays the leading role in CAIM. This does not mean that the teacher has nothing to do in it. CAIM has put the teacher in background and not eliminated it. It has taken the control of the educational activities. The teacher is still present but in the background. We cannot ignore the importance of a teacher in CAIM system. Any machine can do nothing in any field without human assistance. So as is with computer.

The system is made workable by the teacher. If computer provides the instructions to the learners, it is the teacher who gives instructions to the computer. The role of teacher can be seen from following points:

- *In Planning:* Teacher is the designer and planner of all activities. He/She has to decide what to do? how to do? and what should be the outcome of the process? The initial planning becomes the base of all the further activities.
- *Evaluation:* Evaluation is an important part of CAIM. The teacher decides the following:

- How to evaluate?
- When to evaluate?
- Interpretation of Result

It is the teacher who knows all about this. He can plan and design perfectly the evaluation process.

- *Selection of feedback techniques:* Feedback is necessary in CAIM. There are various types of feedback techniques. Each has its own advantages and applications. The teacher decides which feedback technique is to use? and when to use? He/she can also design a comprehensive feedback technique.
- *Selecting motivational techniques:* Motivation is required in the learning process. Lack of motivation makes the process boring and the students indifferent. Thus proper motivational techniques should be used and this decision is taken by the teacher.
- *Providing Guidance:* The students may adopt wrong way in the CAIM process. The students can go in wrong direction. It is the duty of teacher to provide them proper guidance related to the CAIM system. The students keep on right track with timely and proper guidance.
- *Providing human touch to system:* After all computer is a machine. It makes the system mechanical. This can harm the students in many ways physically as well as psychologically. The human touch is required in the system. This human touch is provided by the teacher.
- *Developing Instructional Material:* What is to be taught to the students is a big issue. What type of content should be presented to the students? What should be the sequence of presentation of content? All these decisions are taken by teacher.
- *Selecting Method:* The methods and techniques to be used in the system is another factor which is decided by the teacher. The teacher knows what the methods of teaching are and which one will suit to the students who are going to use the CAIM system.

VIII. CONCLUSION

As stated above, the Computer Assisted Instructional Materials have a number of benefits in teaching-learning process. Its effectiveness becomes more effective instructional materials to bring and the attention of students in teaching-learning process.

Thus, the teacher has to play a lot of duties in CAIM. The machinery in CAIM cannot replace the teacher. Infact nothing can replace a teacher in the teaching - learning process. Only the place may change. Sometimes the teacher is in front and sometime computer.

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