

2. ROLE OF COMPUTER AND INFORMATION TECHNOLOGY(IT) IN EDUCATION

In earlier days, computers were used in the classroom to teach the basic skills and provide the knowledge of computer as per the curriculum. For example, word processor was used to improve the writing skills of the students. Moreover, students were evaluated on the basis of standardized test scores or other traditional measures to assess the student's achievement. Computer and its technology has been performed various roles such as tutor, surrogate teacher etc.in different field of education. It changed dramatically in the nature of way of teaching has been used in classrooms. Its technology has proved very successful in education management applications like planning, data analysis etc[2]. According to J. T. Fout[2], the first computer was introduced into the field of education as "students and teachers learning program". Thereafter, learning process was improved by software sophistication and instruction design and it is still in progress. According to Y.Bo [9], computer technology should be used to reform the teaching methods and curriculum program and the author also present a report on the usage of computer in the field of education. According to Li. Yumei[10], computer can be used in education by three different ways such as "As a teacher", "As a learner", and "As an assistant" and author also describe each role in detail. Broadly, one can consider the following roles of education where computer has been effectively used as shown in Fig.3.

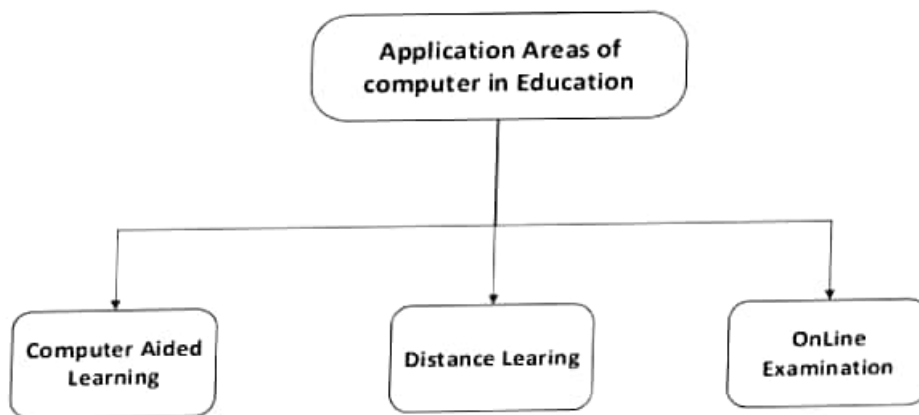


Fig.3 Different roles of Computer in Education

2.1 Distance Learning

Computer has become an important part of every walk of life such as on campus, at home and in office. Computer and related technologies have been used in distance learning through various ways such as Teleconferencing, video-conferencing, audio graphics, Teletext, video text, multimedia and hypermedia, e-books, online database, online discussion, on-demand call in course etc[11]. Virtual classrooms play an important role in distance learning. Students can raise their doubts and teachers can provide the solutions without going to one's place[12].

The following are the different benefits of using technology in distance learning:-

- Cost effective
- Independent of time and place
- Quality education through results access from mass product of course material
- Simultaneously a lot of students can be benefitted

2.2 On-Line examination and monitoring

Online examination and monitoring system have completely changed due to the development of modern education technology. These systems ensure about the fairness and impartiality in the examination [13]. Various researchers [14][15] have been developing online examination system based on web. Today, various exams like GRE, GMAT, SAT, CCNA, MCSE and much more have been conducting computers in all over the world. There are following benefits of using the online examination and monitoring systems:-

- Security
- Fairness and impartiality
- Save time and cost

2.3 Computer-Aided Learning

Today, computers have improved the quality of teaching and enhance the learning process with the help of various tools such as multimedia projector, PowerPoint presentations etc. Traditional methods of teaching can be monotonous, boring and students start getting frustrated. But information technology make learning process more interested through games, animated graphics etc. There are the following benefits of computer-aided learning:-

- Interest and motivation
- Individualization
- Compatible learning style
- Optimal use of learning time
- Immediate feedback
- Error analysis
- Repetitive practice
- Pre-determined to process syllabus