International Journal of Home Science

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Educational technology: A review study

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Abstract
Man has always desired for excellence. This desire has given birth to new innovation and inventions in all the walks of life. Science and technology has always been instrumental in bringing efficiency and improvement in the processes and products of the human work. The world of education has also been influenced by the increased use of technology. The use of the technology varies from formal to non-formal education and from distance to continuing education. The various media, such as television, radio, computer etc., have now been used extensively to supplement and complement the formal education at the higher education. Additionally, most of the world's open and distance education (ODE) institutions are completely dependent on the education technology to deliver the course content at the higher education level. Thus, the technology should be used to enhance the education by engaging students into higher order thinking skills and not as a substitute for teaching.

Keywords: Education, desire, formal etc

Introduction
The word education is derived from the latin word "educatum" which is consist of "E" and "Duco" where "E" means a progress from inward to outward while "Duco" means developing or progressing. It is the process of developing inner abilities and power of an individual. Technology is derived from Greek word "teachnic" means art or skill and "logia" means the study or science. Educational Technology (ET) is the efficient organization of any learning system which adapt or adopt methods, processes, and products to serve defined educational objectives. This involves systematically identifying the education goals, recognizing the diversity of learner needs, the contexts in which learning will take place, and the spectrum of provisions needed for each. Spector in 2015 stated that educational technology involves the disciplined application of knowledge for the purpose of improving learning, instruction and/or performance. Thus, we can say that Education plays a major role in keeping young aspirants of the society aware and up-to-date with the new developments. Introducing ICTs In the educational sating is a major endeavor. Education through Information and Communication Technology (ICT) has become effective, useful and interesting way of proceeding teaching practice now-a-days.

Revolution and Development of Educational Technology
Erich Ashley (1967) has identified four revolutions in education. They are,
- **First Revolution:** Revolution of shifting the task of educating the young ones from parents to teacher and from home to schools.
- **Second Revolution:** Revolution of adoption of the written word as a tool of education.
- **Third Revolution:** Revolution as a result of invention of printing and availability of books and other teaching-learning material.
- **Fourth Revolution:** Revolution on account of development in electronic, chiefly involving radio, television, cassette recorder and computer, and development of systems concept.

Importance of Technology in Education
The role of technology in the field of education is fourfold. It is used as a part of the curriculum, as an instructional delivery system, as a tool to support guidance and also as a tool to improve the learning process as whole.

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Education is essential in both academic and corporate settings. In the former, education or training help workers to do things differently from what they did before. In the latter; education is aimed at generating interest in student minds. Using technology in either case will help the students better understand and remember the concepts for longer period.

Functions of educational technology
The introduction of educational technology has modernized the teaching-learning climate of the educational institutions. It has turned a passive classroom into active with audio-visuals, maps, templates, smart classroom and e-learning rooms that have significantly inspired and enhanced student attention. It helps to develop appropriate curriculum, good teaching-learning materials to achieve desired goals. Select appropriate audio-visual aids supplement the instructor in academic programmes. It not only maintained the standards of education but also improved the ways of teaching by giving it teaching Aids and programmed Instructional Material. Thus, Educational technology serves all the purposes for modern education. Education today can't go far without the help of educational technology.

Principles of educational technology
1) **Principle of intention:** Learning does not take place unless the student has a purpose or intention for undertaking the activity. Learning is not by accident, learning is intentionally undertaken. Teachers can structure a means by which the learners can identified a need, which they have not felt before.
2) **Principle of creativity & innovation:** The ability to produce an original concept or idea and translate it to some forms of expression like a piece of art or craft, a musical score or a literary piece. Creativity is a special talent, which most of the students and pupils have.
3) **Principle of Discovery:** Students are elated at the thought of being able to discover by themselves the solutions to their problems. They feel so accomplished if they are able to discover a process, a relationship or a pattern of behaviour with the lest assistance from their teacher.
4) **Principle of Understanding:** One cannot learn anything unless he/she comprehends the situation, the process, the concept, the philosophy and the meaning of the learning task or tasks. Understanding is seeing relationship, the differences and or similarities of events and processes and how they affect his life as a student.
5) **Principle of Cooperative Process:** Learning is more impressive if the students or the pupils share in planning and organizing the learning activities with the guidance of the teacher. Under the cooperative learning process the pupils share in searching and reporting findings in answer to specific learning problems.

Factors affecting the education technology
1) **Affordable & availability:** When a teacher choose a tool as a part of educational technology. The said material should be affordable and available as much as possible in the local environment.
2) **Access:** The most basic necessities toward effective technology is access of computer to run educational programes. If the environment is not fitted with the sufficient computers and fast internet connections, then it is not feasible to implement the education technology.
3) **Training:** The teachers are not provided the professional training on new technologies, thus they are not able to utilize it to its full potential. There is shortage of time to practice new and ever changing technology due to huge burden on teacher.
4) **Support:** Proper access to technical support (classroom, informal), infrastructure availability (computer labs, software), policies (whether to administer digital homework) and tie allocated to incorporating new technologies are the major challenges for teachers.
5) **Resistant to change:** Educators are comfortable and accustomed to the traditional teaching method, therefore resist changing and leaving their comfort zones. According to the researchers, teachers and school administers often see technological innovation as outside their job descriptions.
6) **Risk & security problem:** Thefts and vandalism are a significant threat to the introduction of technology into classrooms. Outsiders are stealing computers equipments such as hardware and software. This can leave the school without any equipment as most equipment is donated by companies.(M Z. Ramorola, 2007) [8]
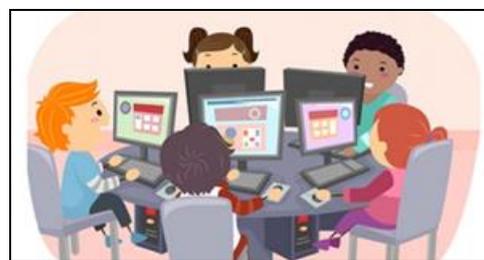

Fig 1: Encourages Individual Learning

Fig 2: Improves Engagement

Advantages of educational technology
1) **Improve engagement:** The student are expected to be more interested in the subjects they are studying when technology is integrated into the lesson. In spite of teaching the same things in new ways, technology offers various opportunity to make learning more interesting and enjoyable. Therefore, technology can encourage a more active participation in the learning process which can be hard to achieve through a traditional lecture environment.
2) **Improve knowledge retention:** Students who are involved in the issues they learn, are likely to have higher rate of retention. As stated earlier, technology can help promote active participation in the classroom which is also a very important factor for improved retention of information.
3) **Gain useful skills:** Technology can helps to improve many practical skills, including the development of presentations, learning to differentiate reliable from unreliable sources on the Internet, maintaining proper

online etiquette, and writing emails. It also helps solving complex problems, critical thinking, developing different forms of communication and leadership skills, and improving motivation and productivity.

4) Encourages Individual Learning: Owing to different learning styles and different abilities nobody learns the same way. Technology provides tremendous opportunities to make learning more effective for all those with specific needs. For instance, student can learn at their own speed, review difficult concept or skip ahead when they need.

Disadvantages of education technology

1) Immense expenditure: This is an era of advanced technology where the computer systems replaced the use of paper and pen with its high tech feature and to keep them a large of cash is required via school which can in any other case be spent to purchase essential resources.

2) Inevitably distracting: One of the records revealed that 60% of the schools in U.S.A issues laptops and tablets. As you comprehend that in existing era social networking websites are actually ruling the world with its alluring innovations, therefore students are busy in checking their posts and updates, counting the likes, checking the status, engage in commenting on social sites etc. All these activities create a massive distance between them and their education.

3) Misguiding by wrong information: Many websites come with incorrect facts that has been copied and pasted from different sources besides checking its authenticity. The learners are therefore misled by inaccurate details available on the websites. Perhaps these issues will become significant obstacles in their evolution.

Conclusion

Technology is a valuable tool for both teaching and learning and becoming a part of life. The effective use of technology in teaching-learning process can help in bridging the gaps. The introduction of educational technology should make a significant investment in the establishment and maintenance of educational technology to support teaching and learning. This gives more opportunity and choices to students to explore and share information to greater extent than available in a traditional classroom. Thus, use of educational technology has the potential of enhancing the quality of teaching and learning.

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