

E-LEARNING: AN IMPORTANT EDUCATIONAL TECHNOLOGY

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Abstract— Education plays an important role in the progress and development of human civilizations and cultures. During the early days of evolution, the scope of education was restricted only to learning and practising things for their utility. As the human race move towards the civilised living, gradually the meaning and scope of education started changing and still it is in progressive form with the advancements in the fields of science and technology and also with the changing needs of our ambitious and progressive societies. The basic aim of education is to gain more and more knowledge with less effort. Various educational technologies provide support in this area. In 1992 The National Policy on Education emphasized using educational technology to improve the quality of education.

E-learning is such educational technology which is gaining more and more popularity in the field of teaching- learning due to its impact, effectiveness and efficiency. This paper is a humble effort to discuss the role of e-learning in the field of education, its advantages, disadvantages, types and various other things related to e-learning as far as its educational implications are concerned.

Keywords— Educational Technology, E-learning, Educational Implications.

I. INTRODUCTION

Education: Education is a lifelong process. It starts from cradle and continues throughout the life. It is a dynamic process. It is a process of modifying behaviour and character formation as a child always learn from his experiences so education should be such that it helps in an all-round development of the individual. It should help the child to grasp and retain more knowledge and also use it efficiently as and when required.

Types of Education: Education can be formal or informal.

Formal: It occurs in structured environment and its explicit purpose is teaching students. The three important components of formal education are teacher, taught and the curriculum which is taught in predefined settings. The teacher is always at the giving end and the taught is at the receiving end so the acquired knowledge totally depend on the efforts put by the teachers.

Informal: It occurs outside the educational establishments. It does not follow specific curriculum. In fact, it is an ongoing process at home, at work place or at different settings of our society and neighbourhood. It goes on throughout the life as this type of education is attained by experiences gained in different situations of life.

Stages of Education: The complete education period can be divided into 3 main categories:

Primary Education: It is the most important stage as it forms the foundation of whole education and also provides a direction. Under Education For All program driven by UNESCO, most countries have committed to achieve universal enrolment in primary education by 2015. In India compulsory education

spans over 12 years with 8 years of elementary education, 5 years of primary schooling and 3 years of upper primary schooling. Various Indian states provide 12 years of compulsory school education based on national curriculum framework designed by the National Council Of Educational Research and Training.

Secondary Education: It is a crucial stage and its purpose is to give common knowledge to the children and to prepare for higher education or to train directly in a profession.

Tertiary Education: This stage includes undergraduate, post graduate and vocational education and training. This stage is the deciding stage as the job opportunities or the career options are totally dependent on this stage. Proper decision making is required in this stage as it is very important to select a course of study according to individual interest and aptitude.

Educational Technology: Education can be made more effective by applying proper educational technology which includes all the resources used to make the outcome of education fruitful and result oriented. Educational technology can be defined as a tool as well as a medium for improving or enhancing the level of education. It should be designed and implemented in such a way that it facilitate the learning process and increase the performance of students in terms of grasping, recalling and using it in an effective way.

“It is the use of technology to improve education. It is a systematic, iterative process for designing instruction or training used to improve performance. Sometimes it is also known as instructional or learning technology.” (*Wikipedia: Educational technology*)

Development and Progress of Educational Technology:

Education Commission (1964-66) has recommended to use programmed instruction in schools and colleges for teaching various subjects.

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In 2004, ISRO (Indian Space Research Organisation) launched EDUSAT, a communication satellite providing access to educational materials that can reach more of the country's population at a greatly reduced cost.

In Africa NEPAD (New Partnership for Africa's Development) has launched an e-school program to provide all 600,000 primary and high schools with computer equipment, learning materials and internet access within 10 years.

In 2012, modern use of educational technology had grown at 14 times the rate of traditional learning.

E-learning: It refers to the electronic learning that is using computers or electronic devices in the teaching-learning process to make it more efficient and purposeful. The use of e-learning is increasing day by day due to its fruitful results and easy availability. It is finding its use in formal as well as in professional education as its impacts are remarkable and long lasting.

History of e-learning: As we know, e-learning utilises the concept of distance learning and virtual classes. These distant classes were conducted before the use of Internet also. In 1840's Isaac Pitman taught shorthand to his pupils via correspondence. In 1954, B.F. Skinner. A professor of Harvard University invented a teaching machine which helped schools to administer programmed instruction to their students. In 1960, the first computer based training program PLATO (Programmed Logic For automated Teaching operations) was designed for the students of University Of Illinois. By the early 90s, a number of institutions came to limelight which offers the distance learning courses using the electronic media.

Advantages of e-learning:

1. There is no time bound program.
2. Students can learn on their own pace.
3. Mostly the e-learning programs are cost effective.
4. It provides flexibility in utilising the resources.
5. Individual differences can be taken into consideration.
6. The impact is more as what we learn goes to our long term memory.
7. Provides easy grasping and better recalling of concepts.
8. It is a boon for drop outs and working professionals.

Disadvantages of e-learning:

1. Technological issues are always there.
2. Not suitable for rural and remote areas.
3. Total responsibility lies on the student.
4. Sometimes the content is not up to the mark.
5. It causes isolation and in some cases mental depression.

E-learning in present scenario: The concept of e-learning has revolutionised the educational scenario of the world. More and more educational institutes are utilising the concept of e-learning to provide quality education to their students. Harvard and MIT (Massachusetts Institute Of Technology) are the 2 well known Universities of the world utilising e-learning for their students. In India IGNOU (Indira Gandhi National open university) offers a number of degree, diploma and certificate courses utilising the concept of e-learning and distance learning programs. Schools are also utilising e-learning by providing online notes and assignments to its students.

The maximum utility of e-learning can be observed in Corporate sectors where the professionals always have to update themselves in order to meet the required standards of their companies and also for their promotions and salary hike. Their professional liabilities and the hectic time schedules don't permit them to enrol for regular courses. e-learning has evolved as a great help for such professionals . If a person is willing to devote some time, he can easily enrol for any course utilising e-learning as technological aid and he can easily attend the classes according to his time and pace in the confines of his home or office.

Future of e-learning: As e-learning is a concept or the tool directly associated with technology, its use will definitely increase with the advancements of science and technology. The present decade has already seen the transformation from traditional teaching methods to more scientific and technologically advanced teaching methods utilising more and more tools with the aim of making education more assessable and easy to understand and recall. e-learning is going to stay in future. Instead it will be utilised more and more as the accessibility will be possible through smart phones and other portable devices. The common masses will be more comfortable to use technology in the coming times and that will definitely help in the increased use of e-learning.

Tools of e-learning:

Content: It is the most important tool of e-learning as the efficiency, utility and fruitfulness of e-learning is directly associated with the well designed content keeping in mind the individual differences of the learners and also their cognitive aptitude and capabilities.

Exercises: As the learner is using his own time and pace for reading and understanding the content,

exercises based on the content play a very vital role in the assessment of the learner. All the exercises and assignments should be wisely designed. They should be short, interesting and capable enough to check the progress of the learner.

Illustrations: All the illustrations should be clearly labelled and properly explained to make the content interesting and understandable.

Games and Quizzes: Interesting and knowledgeable games and quizzes can be designed using the taught content so that the gained knowledge can be checked in an interesting way.

Content Authoring Tools: These are software packages used by the developers to design e-learning content. According to Wikipedia, "a Content Authoring Tool is a software application used to create multimedia content typically for delivery on the World Wide Web. This Tool may also create content in other file formats. The categories of Content Authoring Tools include HTML, Flash and various types of e-learning authoring tools."

Synchronous and Asynchronous e-learning:

The e-learning methodologies followed nowadays can be divided into 2 main categories:

Synchronous e-learning: Any real time learning using electronic media where the teacher and taught are in direct contact is called Synchronous e-learning. e.g. online chat and Video conferencing. Advantage is that the students are in direct communication with their teachers so they can clear their doubts and does not suffer with the feeling of isolation. Disadvantage is that it is not suitable for those who are already having very hectic working schedules.

Asynchronous e-learning: Any learning using electronic media and where the teacher and taught are not supposed to be online all the time is called Asynchronous e-learning. e.g. chapters and assignments posted on web, mails etc. Advantage is that the students can learn with their own pace and in their available time. It is the best method for the working people and the professionals. Disadvantage is that it causes feeling of isolation and those who need regular motivation from their teachers will not be able to benefit from them.

Micro learning With Reference To e-learning: It literally means leaning in small pieces. It is quite effective approach in e-learning as it helps the learner to get the fragments of the content which he can easily grasp and recall instead of getting the complete chapter at one go.

CONCLUSION AND SUGGESTIONS

It is a well established fact that e-learning is one of the important educational technologies that can give remarkable results. It is really a boon for all the working communities around the globe who really want to update themselves without leaving their jobs. E-learning can be used at all the levels of education.

As it is an educational technology, its efficiency totally depends on its development and implementation. The e-learning content should be designed keeping following points in mind.

1. Content should be authentic.
2. Simple and easy language should be used.
3. Illustration and demonstrations should be at par.
4. Exercises should be interesting.
5. Content should be platform independent as it should run on all the common systems.
6. Quizzes etc should be planned to test the gained knowledge.
7. On line support should be there for clarifying the doubts.

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