

ABSTRACT

E-learning covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms and digital collaboration. It includes delivering content via the Internet, intranet / extranet (LAN / WAN), audio and video, satellite broadcast, interactive TV and CD-ROM. The main advantage of electronic learning is its flexibility and convenience. One can learn at one's pace by choosing time as per one's convenience. E-learning has shown tremendous growth in every sector of training and development. For every individual, no matter in what sector one works, e-learning solutions are there to help them out with improved efficiency and result oriented tasks in particular environment.

INTRODUCTION

E-learning is the name given to computer enhanced learning. Computers play a big role not only in learning but education as such. The role of computers in supporting the cause of education varies greatly. Information technology is used both as medium and tool in education. E-learning is fast emerging as the preferred solution for delivering online and virtual learning, regardless of barriers like time and location. Over the years, E-learning has also evolved into a full-fledged mode of delivering learning at the convenience of the learners. For teachers and trainers, it offers a whole new world of exciting options to supplement classroom interaction with technology-enabled content and to explore alternative options to extend the classroom. For learners, it signifies flexible and personalised learning options that are available to them at their convenience.

E-LEARNING : DEFINITIONS

There are several ways to define E-learning, depending on the context in which it is used, the purpose or goals and the type of tools and technology.

Rosenberg (2001) defines 'E-learning as the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance'. It is based on three criteria, which are as follows:

- It is networked and lends itself to instant updating, storage/retrieval, distribution and sharing of instruction or information.

- It is delivered to the learner via standard Internet technology.
- It focusses on the broadest view of learning by accommodating different ways of acquiring knowledge.

Clark and Mayer (2003) define E-learning as instruction delivered on a computer through a CD-ROM, Internet or intranet with the following features:

- It includes content relevant to the learning objectives.
- It uses instructional methods, such as examples and practice, to help learning.
- It uses media elements, such as words and pictures, to deliver the content and methods.
- It may be instructor-led (synchronous learning) or designed for self-paced individual study (asynchronous learning).
- It builds new knowledge and skills linked to individual learning goals or to improved organisational performance.

E-learning is instruction that is delivered electronically, in part or wholly via a Web browser, through

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the Internet or an intranet, or through multimedia platforms such as CD-ROMs or DVDs (Hall, 1997).

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AIDS TO E-LEARNING

With the advancement of science and technology, the traditional imparting of education is supplemented by the use of audio visual aids like overhead/slide projectors and videos. These are passive teaching tools. Advancement in computer multimedia introduced a new teaching media. Multimedia education has brought in many advantages. User centered asynchronous distance learning with interactivity has brought new vistas of learning. Growth of Internet has introduced a new dimension to learning. Learning material hosted and maintained at one place can be accessed globally. Intelligence, interactivity and simulation are worth mentioning here. Dynamic simulation modeling puts the user in the problem area. Many technologies can, and are, used in E-learning:

- screencasts
- ePortfolios
- Palm pilots
- MP3 Players
- the use of web-based teaching materials
- hypermedia in general
- multimedia CD-ROMs
- websites
- discussion boards
- collaborative software
- e-mail
- blogs
- text chat
- computer aided assessment
- educational animation
- simulations
- games
- learning management software
- electronic voting systems
- wiki (wiki is a piece of server software that allows users to freely create and edit)

Most E-learning situations use a combination of the above techniques.

DIFFERENT TYPES OF E-LEARNING

Online learning

This involves the use of courseware that is delivered over the Internet to learners at a variety of locations, where the primary interaction between the learner and the experiences of their learning occurs via networked computer technology. Increasingly, learning management systems are beginning to serve as the basis for building online programmes wherein the learning experience is entirely mediated through a digital interface.

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Blended learning

This refers to the blending of multiple modes of delivering learning. It is also known as hybrid learning. Based on the design of the learning, blended learning can have a mix of different environments such as the classroom, the Web and the virtual classroom. In this type of learning, one can make use of different delivery technologies and tools such as mobile phones, handheld devices, laptop or desktop computers and television.

Virtual classroom

The objective is to extend the traditional classroom structure by moving it beyond the physical campus to learners spread across different geographical regions. It is helpful for those who pursue their learning in the distance mode and the course is entirely online. They would benefit from real-time interaction with other learners and faculty through the Internet.

Mobile and ubiquitous learning

This makes E-learning extremely flexible by doing away with desktop dependency and by leveraging ubiquitous networks and portable digital devices, such as laptop computers, PDAs, MP3 players, gaming devices and mobile phones. Since these devices are very handy, one can use them by combining informal and formal learning experiences.

CD-ROM and kiosk-based learning

Besides the CD-ROM and DVD that can be played on computers and television, E-learning can also be designed and delivered through touch-screen kiosks. This is useful when there is no dependence on the internet and when the content has a long shelf-life or deals with generic topics. Since kiosks require simple user interaction for accessing information, it meets the learning needs of an audience with low literacy levels.

CHARACTERISTIC FEATURES OF E-LEARNING

The following are some of the features of E-learning that differentiate it from other forms of learning.

Self study : It offers the freedom to choose courses and to study at one's own pace. This makes E-learning an individual effort, mostly self-driven. The responsibility of learning and completing the course rests on the learners, though there are opportunities to collaborate with peers and instructors.

Oriented towards adult learners : Adult learners may find E-learning more attractive than classroom-based learning. There is scope for various media, multiple options to learn that respect individual differences and it is also possible for them to share their knowledge and experience through collaboration with experts and peers.

Motivating learning : Learning can be fun with a wide range of learning materials. Learning can become interesting, it can sustain attention and motivation; it becomes easy and engaging as there is scope for interaction, role play, games, quizzes; all of which result in an increase in retention.

Development and certification of skills and competencies : There is scope to link performance improvement by developing the right competencies in an organisation. It is possible to carry out a skill gap analysis to provide the right kind of learning that can help perform the job. Online testing and certification can also be integrated with E-learning.

Scalable and consistent : With the use of tools and technology like LMS, it is possible to handle increases in enrolment, provide consistent content across various locations and provide the facility to customise at the same time, depending on the requirements of a particular region.

Flexibility of media : The medium used is primarily the Web, which offers flexibility and options for personalisation: the option to read or listen to the audio, the option to view the video and listen to audio or read the subtitles. Information can be presented in chunks and the page can be personalised using one's preferences.

Use of digital media : Digital technology is used to produce and distribute different types of content like

text, images, photographs, audio, video and animation, besides other forms of content like Web pages using authoring tools.

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Use of virtual elements and social media
When learning takes place in a virtual classroom, various tools are used for interaction, collaboration and networking. Along with this, social networking tools facilitate discussion, instant sharing of information and knowledge both in formal and informal learning.

Collaborative process for content development
: This involves a team of people with diverse competencies like instructional design, programming, visual design, user experience design and subject matter expertise working together in a collaborative manner using the same content authoring environment.

THE 7 CS OF E-LEARNING

The 7 Cs of E-learning derived from the distinguished features are:

Convergence : Various media get inextricably interwoven, to form a convergent framework for designing, developing and delivering E-learning in various formats.

Collaboration : Connectivity and social networking have a significant impact on making E-learning collaborative, social and empowering.

Cost-effectiveness : Organisations can save on travel and loss of the productive time of their employees. Academic courses can enhance their outreach, by providing quality learning context across locations.

Customisation : E-learning offers options to customise the environment and content to suit specific learner requirements or organisational learning needs.

Convenience : Learners can access the courses anytime and anywhere at their convenience. They can have personalised learning paths that meet their learning goals.

Consistency: Irrespective of who the subject experts are, the courses offered through E-learning have consistent presentation of content, meeting quality and standard specifications.

Centralisation: Tools like LMS provide centralised delivery and tracking, while an LCMS facilitates content development in addition to delivery.

ADVANTAGES AND DISADVANTAGES OF E-LEARNING

The main advantage of electronic learning is its flexibility and convenience. One can learn at one's own pace by choosing time as per one's convenience. As the sessions are asynchronous, it is not bound by time or place. This makes it open ended, most suitable for distance learning. It is very cost effective. Great adaptability to the needs of the learner, more variety in learning experience, repeatability of the learning environment are some of the other advantages. The abstract concepts can be presented better with the help of multimedia.

The greatest disadvantage is the absence of human touch. Education is not just acquiring knowledge; especially educating the young involves personality development. This aspect would be missing in E-learning. Even though human interactions can readily be achieved through audio or video-based web-conferencing programs, threaded discussion boards etc, it will not bring in face to face interaction effect.

IMPLEMENTING E-LEARNING FOR THE EDUCATIONAL SYSTEM

E-learning has shown tremendous growth in every sector of training and development. For every individual, no matter in what sector one works, e-learning solutions are there to help them out with improved efficiency and result oriented tasks in particular environments. A step on, E-learning in association with blended learning has proved an asset in many frameworks of working, the reason being that traditional methods of training help understand a concept faster for those who don't feel comfortable with the highly technocratic E-learning methodologies. E-learning methodologies implemented in educational institutions have resulted in experiencing increased knowledge and a general augmentation of interest in different subjects of study. Colleges, schools and distant learning institutions which have successfully implemented innovative E-learning curricula are reaping good results in terms of knowledge and education.

SUGGESTIONS FOR IMPLEMENTING E-LEARNING

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1. E-learning is more than online courses
2. Content is not the answer to every learning problem
3. Beauty is in the blend
4. Learning solutions must be appropriate
5. E-learning is a strategic solution
6. An LMS is not a necessary prerequisite for E-learning
7. Coordinated E-learning efforts make sense
8. Success measures should be clearly identified
9. The right conditions need to be in place for E-learning to succeed
10. Just do it!

It is widely acknowledged that implementation of E-learning leads to a fundamental shift in learning styles. Traditional teaching and learning skills need to change in order to get maximum benefit from virtual learning (McFadzean, 2001), hence lecturers are posed with the task of developing a new model of effective teaching. Many researchers have attempted to lay down criteria for successful online teaching.

CONCLUSION

Considering the advantages and disadvantages of the two learning paradigms, E-learning and traditional learning, nowadays the combination of the two are more and more advocated. This type of learning is termed blended learning. In this type of learning effective combination of different modes of delivery, models of teaching and different styles of learning are followed. Communication amongst all the parties involved would be transparent. Essentially blended learning would be an effective blend of face to face teaching/learning and E-learning.

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