



Advanced Educational Technology: A Changing Scenario of Education

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Abstract

In the 21st century, we have many options to do our teaching and learning in better way. Educational Technology has many dimensions of performing things as it's require. E-learning to Virtual learning technology create many changes in day to day teaching and learning process from school level to Higher education. Many teachers and students are going to use virtual learning technology for gaining advanced knowledge. The role of internet is also significant for all technologies like E-learning, M-learning (Smart Mobiles, I-pod etc.) V-learning etc.

Keywords: *educational technology, technology based learning, e-learning, m-learning, v-learning, Self-paced*

INTRODUCTION

Globalization and technological changes have created a new global economy “Powered by technology, Fuelled by information and driven by knowledge”. The emergence of this new global economy has serious implications for the nature and purpose of

educational institutions. As the half-life of information continues to shrink and access to information continues to grow exponentially, schools cannot remain mere venues for the transmission of a prescribed set of information from teacher to student over a fixed period of time. Rather, schools must promote "*learning to learn*" i.e., the acquisition of knowledge and skills that make possible continuous learning over the lifetime.

TECHNOLOGY-BASED LEARNING

Technology-based learning (TBL) in the early 21st century is transforming the way people learn at a time when two powerful trends converge. The first trend is the rapid acceleration of technological change and the demand that this change places on education and workforce training. While successful economies have always depended on a skilled and knowledgeable workforce, today's rate of change in production processes and workplace tools requires much more training and retraining of individuals on the job than it did in the past. As more workers become knowledge workers, the demand for frequent retraining is further accelerated with each technological shift. Industry has to be able to retrain its workforce much more quickly, and the development cycles of training programs have to be shortened if companies want to stay competitive. Given that updating workers' skills rapidly and as the need arises is so critical in today's economy, the efficiency with which companies do so can thus be critical in helping them maintain a competitive edge.

ICT IN EDUCATION

"The illiterate of the 21st century," according to futurist Alvin Toffler, *will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn*". Concerns over educational relevance and quality coexist with the imperative of expanding educational opportunities to those made most vulnerable by globalization—developing countries in general; low-income groups, girls and women, and low-skilled workers in particular.

Global changes also put constantly pressure on all groups to acquire and apply new skills. Information and communication technologies (ICTs)—which include radio and television, as well as newer digital technologies such as computers and the Internet—have been treated as potentially powerful enabling tools for educational change and reform. When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life. However, the experience of introducing different ICTs in the classroom and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICTs is not automatic. The effective integration of ICTs into the educational system is a complex, multifaceted process that involves not just technology—indeed, given enough initial capital, getting the technology is the easiest part but also curriculum and pedagogy, institutional readiness, teacher competencies, and long-term financing, among others.

E-LEARNING AND M-LEARNING: CONCERNS

E-learning has been promoted as being more cost effective, convenient, and increasing opportunities for lifelong learning. It has demonstrated several advantages over traditional learning, especially in allowing "*learning anytime and anywhere*." Students have access to online course materials independent of time and place. It also allows students to reflect on the learning materials and their responses, and permits them to work at their own pace, regardless of race, sex, disability or appearance.

The term M-Learning, or "mobile learning", has different meanings for different communities. Although related to e-learning, Eudtech and distance education, it is distinct in its focus on learning across contexts and learning with mobile devices. One definition of mobile learning is: *Any sort of learning that happens when the learner is not at a fixed,*

predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies. In other words, with the use of mobile devices, learners can learn from various locations.

M-learning is convenient in that it is accessible from virtually anywhere. M-Learning, like other forms of E-learning, is also collaborative. Sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. M-Learning also brings strong portability by replacing books and notes with small RAMs, filled with tailored learning contents. In addition, it is simple to utilize mobile learning for a more effective and entertaining experience.

VIRTUAL EDUCATION: Concerns

Virtual Means- “*that which is not real*” but may display the full qualities of the real. Philosophical meaning of virtual refers to an important reference in thinking about the way relates to the philosophical tradition. “Virtual” is not opposed to “real” but opposed to “actual,” whereas “real” is opposed to “possible.” This definition, which is almost indistinguishable from potential, originates in medieval Scholastics.

The word virtual has been applied to computing and information technology with various meanings. It is used for software systems that act as if they were hardware systems (virtual machine, virtual memory, virtual disk), of computer-generated simulations of reality (virtual reality), and of internet gaming environments wherein entire worlds are created (virtual world). Other applications of the word are being found constantly in this fast expanding field, such as virtual community, and virtual library. These technologies build the environment for virtual work in teams, with members who may never meet each other in person. Communicating by telephone and e-mail, with work products shared electronically, virtual teams produce results without being co-located.

- Virtual education refers to instruction in a learning environment where teacher and student are separated by time or space, or both.
- Teacher provides course content through course management applications, multimedia resources, the Internet, videoconferencing, etc.
- Virtual education is a term describing online education using the Internet. This term is primarily used in higher education as Virtual Universities.
- Virtual courses – “*Virtual*” is used here to characterize the fact that the course is not taught in a classroom face-to-face but through some substitute mode.

SYNCHRONOUS AND ASYNCHRONOUS DELIVERY MODES

Technology-based learning is grouped into synchronous and asynchronous delivery modes. TBL courses often employ both modes in a form of blended learning.

Synchronous learning delivery occurs when instructors and learners meet at a specific time in a physical or virtual classroom, in person or via Internet, satellite, or phone link-up. In a TBL setting, synchronous learning occurs in broadcasted lectures, teleconferences, video conferences, or webinars. In webinars and web conferences, audio lectures are often accompanied by slides and sometimes a video image of the instructor is streamed to the learner’s desktop. As costs for such web conferences have come down and tools have become more users friendly, synchronous training has become the fastest growing segment of the TBL market.

Asynchronous learning in a TBL environment need not occur at a specified time and is not linked to a specific learning event. Self-paced asynchronous applications include web-based and computer-based courses that learners use at their own pace. Facilitated asynchronous applications range from a simple e-mail dialog or a discussion via a bulletin board to a comprehensive virtual learning environment where the instructor posts readings, video and audio content, and assignments, and then monitors students’ progress over time.

Asynchronous learning also tends to emphasize the role of the community of learners of a given subject.

Online discussions are typically archived and become important repositories of knowledge and learning. Because of this enhanced ability of learners to interact outside of 'in-class events,' the traditional power differential between instructor and learners is less pronounced in an asynchronous environment. Another advantage of asynchronous TBL is that it is no longer constrained by timing or geography. Learners can begin a course when they are ready for it and advance through it as quickly or as slowly as their own time and ability permit.

CONCLUSION

The future of V-learning is very bright, indeed. This idea has been mounting at a very rapid rate as more and more uses for the computer in education have been discovered and attempted. There is an explosion in information and it is beyond the edge of places. It is available everywhere. Interactive web is creating new thresholds by the hour. Questions are now posed and posted literally at others' doors and answers come from most unforeseen quarters. V-learning is the future of e-learning. I-pods are contributing lot to learn the things. Advance educational technology should be used in school level to higher level of education for better understanding of the subject matter. Such technologies should be inculcated in curriculum of higher education to connect with the world.

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