

Conceptual Article

Using Digital Tools in Education

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Abstract

Transition, Transformation and Revolution is the scenario of today's educational system. All process of learning soon crossing boundaries and barriers. The younger generation today is not interested in age-old techniques; rather they are desirous of something more stimulating and challenging to the mundane system seen in classroom's today. Youngsters today, require a change in knowledge, competencies and skills to deal with the technological advancement. Integrated computer technology in today's world is both a challenge and an opportunity. These technology tools are very much needed for academic, administrative research and extension function.

keywords: Educational Transformation, Digital Learning, Technology Integration, Innovative Teaching Methods, ICT in Education, Smart Classrooms, E-learning, Skill Enhancement

Introduction

The traditional approach of lecture and note taking has lost its effectiveness as the modern day around education grows. In efforts to grow academically it must be considered that differentiated modalities of teaching and learning are necessary to implement deeper levels of growth and conceptual development. Since every student is not interested in all subject matters. However, it is the responsibility of the education system to employ a variety of opportunities for the students to gain interests, orchestrating academic growth and progression throughout childhood and adolescence. ICT has turned from being a technology of communication and information to a curriculum creation and delivery system for teachers and learners.

The use of Educational technology can bring a huge change in education. Internet and e-learning devices can make class room environment extremely amazing. Teaching through

computer, internet and multimedia devices will be a common thing in future. Now a day's different multimedia lessons are available. By using these multimedia lessons teachers may teach the students very easily.

Meaning of Digital Tools

We are running into the 21st century where technology knows no bounds. This is the phase of radical development where technology is taking over every niche and corner. Smartphones, laptops, and tablets are no more unknown words. During this phase the education system is evolving for the sake of betterment, as this generation's students are not born to be confined by the limits of simple learning; their curiosity is vast and cannot be catered with educational systems that were designed earlier. If we kept on teaching our children the way we taught them yesterday, we would deprive them of their tomorrow. Our old educational system lacks the capability to stand a chance in the 21st century. So, we are compelled to use digitization in our educational system.

Main Types of Learning in Education Using Digital Tools

Today teachers use electronic medium for the teaching - learning process in the classroom. It is the order of the day that every teacher should use all kinds of educational technologies in their teaching strategy.

Electronic Learning (e-Learning)

Electronic learning is a general term used to refer computer enhanced learning. It is commonly associated with field of Advance Learning Technology (ALT), which deals with both the technologies and associated methodologies in learning using networked technologies. It is also known as online learning. However, e-learning involves more than just the presentation and delivery of the materials using the web; the learner and the learning process should be the focus of e-learning.

E-learning has the following advantages:

- ❖ Eliminating time and geographical barriers in education for learners as well as teachers.
- ❖ Enhanced group collaboration made possible via ICT.
- ❖ New educational approaches can be used.
- ❖ It can provide speedy dissemination of education to target disadvantaged groups.

- ❖ It offers the combination of education while balancing family and work life.
- ❖ It enhances the international dimension of educational services.

Ubiquitous Learning (U-Learning)

Ubiquitous Learning means “everywhere learning” or learning content follows people around. Core “knowledge pots” hold content and information. Various devices plug in and retrieve the information in the appropriate formats like cell phone, laptop or other technology gadgets. It fulfills e-learning’s promise of “anytime, anywhere, and any context”. Ubiquitous Learning (U-Learning) emerged through the concept of ubiquitous computers in education, the introduction of e-learning and mobile learning epitomized the constant transformations that were occurring in education (Muthuchamy, Thiyaagu, 2010)

Virtual Learning

Virtual Learning refers to all learning activities that occur in noncontiguous educational settings where the learners and their teachers are separated temporally and spatially (Anandan, Nallu Samy, 2013). A virtual learning environment is a phrase that refers to technology which supports teaching and learning; it involves collaboration, communication and content tools, as well as providing students with an online personal learning space. Virtual learning environment does not decrease the importance of the classroom or the teacher; it enhances the learning and teaching experience. The virtual learning environment, if used effectively, changes the entire teaching and learning experience by making learning very invigorating, vibrant and real. Virtual learning environment support is dedicated to improving and enhancing the teaching and learning experience not only for the student but for the teacher as well.

Blended Learning

Blended Learning is a face-to-face classroom instruction with online learning. A major part of the activities take place online, while traditional classroom time is reduced but not eliminated. Blended learning sometimes, also called “Hybrid learning”, provides the best opportunities for learning transition from classroom to e-learning.

Blended Learning is the combination of multiple approaches to learning. It is usually used to define a situation where different delivery methods are combined together to deliver a

particular course. These methods may include a mixture of face-to-face learning, self-paced learning and online classrooms.

- **Face to face learning:** It refers to learning that occurs in a traditional classroom setting where a faculty member delivers instruction to a group of learners. This could include lectures, workshops, presentation, tutoring, conference and much more.
- **Self-paced learning:** It provides the flexibility to learn according to the availability of learners' own time and pace. It occurs in a variety of ways such as: reading specific chapters from text book, studying course material presented through web-based or CD based course, attending pre-recorded classes or sessions, reading articles referred by faculty member, working on assignments and projects, and searching and browsing the internet.

Major advantages of blended learning

There are a number of advantages to blended learning. Some of these are ease of access, pedagogical effectiveness, reduction in drop-out rate and course interaction. Students today are non-traditional, attempting to balance jobs, and university life. Blended learning is one way which Institutions of Higher Education are looking for ways to reach and retain these students.

- The time the students spend on Campus would be spent in more effective Learning.
- Increases student engagement, Retention and offers opportunities for more authentic Learning.
- Seamless integration of the learning without depending on borders and physical limits.
- Active Learning rather than passivity in the Classroom.
- Allows for more interaction with the students if they receive the 'lecture' portion outside of the face to face classroom.
- Better opportunity for students to learn in a Collaborative environment and makes better use of student time.

Blog

The term web-blog refers to a simple webpage consisting of brief paragraphs of opinions, information, personal diary entries, or links, called posts, arranged chronologically

with the most recent first, in the style of an online journal. The education Blog can be a powerful and effective technology tool for teaching and learning process.

Blog (a blend of the term Web log) is a type of website or part of a website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Most blogs are interactive, allowing visitors to leave comments and it is this interactivity that distinguishes them from other static websites. Many blogs provide commentary or news on a particular subject; others function as more personal online diaries. A typical blog combines text, images, and links to other blogs, Web pages, and other media related to its topic. The ability of readers to leave comments in an interactive format is an important part of many blogs. Most blogs are primarily textual, although some focus on art (art blog), photographs (photo blog), videos (video blogging), music (MP3 blog), and audio (podcasting).

Wiki

A wiki is a webpage or set of Webpages that can be easily edited by anyone who is allowed access. Wiki is a collaborative tool that facilitates the production of a group work. Wiki pages have an edit button displayed on the screen and the user can click on this to access and easy - to use online editing tool to change or even delete the contents of the page in question. Simple, hypertext style of linking between pages is used to create a navigable set of pages. Wiki allows learners to participate in collaboratively building resources. An essential part of reflective learning is that learners should be encourage to reflect on their knowledge and make it explicit; wikis allow this reflection to be done collaboratively, moving closer to a fully social constructivist mode of learning. Because of their very low technological barriers yet very rich flexible functionality, wiki affords the opportunity to offer collaborative, constructive learning more extensively in our teaching learning environment (McMullin, 2005).

Collaborative learning

The potentiality of the online environment for collaborative learning and mutual support among students was identified early in its history during the late 1980's and early 1990's. Almost all emerging online literature refers to learning as a social experience, and assumes greater flexibility offered by online technologies which can help support the needs

of diverse learners. Network facilitates student's collaboration even in situations where there are no opportunities for face-to face conversation. Collaborative learning is the acquisition by individuals of knowledge, skills and attitudes occurring as the result of group interaction. In collaborative learning students are encouraged or required to work together on a learning task, so that they can encounter different points of view which may bring to light their misconceptions and give rise to synergistic solutions.

ICT has made it easier to study as well as teach in groups or in clusters. With online networking we can be united together to do the desired task. Efficient postal systems, the telephone (fixed and mobile), and various recording and playback systems based on computer technology all have a part to play in educational broadcasting in the new millennium. The Internet and ICTs Web sites are now familiar to many children in developed countries and among educational elites elsewhere, but ICT remains of little significance to very many more, who lack the most basic means for subsistence.

M-learning

Mobile learning simply means "Learning on the move", "any sort of learning that happens where the learner is not at a fixed. Pre-determined location or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies". M-learning means "acquisition of any knowledge and skill through using mobile technology anytime, anywhere that results in alteration of behavior." The term covers learning with portable technologies, where focus is on the mobility of the learner interacting with portable or fixed technology, learning in mobile society with a focus on how its institutions can accommodate and support learning of an increasingly mobile population.

'Mobile Learning' is commonly abbreviated to "m-learning", has different meanings for different communities. Mobile learning is the learning accomplished with the use of small, portable, computing devices. These computing devices include Smartphone, Personal Digital Assistant (PDA) and similar hand-held devices. Learning that happens across locations, or that takes advantage of learning opportunities offered by portable technologies with is named as "Mobile Learning" (M.L. focuses on the mobility of the learner, interacting with portable technologies and learning that reflects a focus on how society and educational institutions can accommodate and support an increasingly mobile population. Peters (2007) viewed mobile

learning as a useful component of the flexible learning model and also stated that it was a subset of e-learning, a step toward making the educational process, “just in time, just enough and just for me”.

Merits of Using Digital Tools in Teaching

Teaching at school as well as Higher Education, mostly, concentrates on giving information which is not the sole objective of teaching. Along with giving information, the other objectives are:

- developing understanding and application of the concepts
- developing expression power
- developing reasoning and thinking power
- development of judgment and decision - making ability
- improving comprehension, speed and vocabulary
- developing self-concept and value clarification
- developing proper study habits
- developing tolerance and ambiguity, risk taking capacity and scientific temper etc.,

With the present infrastructure, class size, availability of teachers, quality of teachers, training of teachers, it is difficult to achieve all the objectives. Further, most of the teachers use Lecture Method which does not have potentiality of achieving majority of above mentioned objectives. The objectives are multi-dimensional in nature, so for their achievement multiple methods should be used in an integrated fashion. It is a well-known fact that not a single teacher is capable of giving up-to-date and complete information in his own subject. In the Internet many websites are available freely which may be utilized by teachers and students for understanding different concepts, improving vocabulary, developing reasoning and thinking, etc.

Conclusion

Thus, Technology has enormous potentiality to deliver many numbers of benefits to the learners and teachers. Unless we use Technology, one cannot obtain up-to-date information to face the competitive world. Using Technology is the need of the hour and essential part of the life of every individual who wish to enrich one's life.

To conclude we can say that with the inclusion of technology, the concept of education is undergoing a modification, for the betterment of the students as well as the teachers.

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