

Emerging Learning Technologies

Topic :- Education 2.0: Heading Towards Neo-millennial Learning

Abstract:

In last few years Education has undergone technological and philosophical makeover. Technology can and is reshaping the way we teach and learn. The concepts like E-learning, M-learning, Online learning, CALL (Computer Added Language Learning), Blended Learning, etc are gaining currency in the field of education. Technology ,Overhead projector, interactive whiteboard, audio player, television, microphones, cellphones, learning software, podcasts, blogs, wikis, educational gaming, social computing, online resources..., the list of 'hot technologies' is long. Right blending of learning technologies can yield wonderful results. Higher education institutions can prosper by basing their strategic investments on using these emerging educational technologies to match the increasingly "neomillennial" learning styles of their students. (Dede, 2004) Technology enables the teacher to present the content in interesting and appealing manner and imparts enriched and joyful learning experience to learners.

However technology is not cheap. A school or an institution with sound infrastructure can afford to buy new technologies. But in setting like India it might be an expensive affair for an institution/college to invest in expensive ed-techs. This paper explores emerging 'cost effective' learning technology: in other words 'idea technology' that can be integrated to redefine learning-teaching. The paper also talks about relevant trends in the field of educational technology as well as practical experiences gained while testing elements of technology enhanced learning.

Introduction:

The emergence of educational psychology and various theories by renown educationalists advocate learner-friendly approach of teaching, individualised attention, creating holistic learning environment and make teaching-learning a 'pleasant experience'. Teachers not only

have to carry out instructional work, they are expected to be facilitator, counsellor, manager, guide and above all a good entertainer. This throws a greater challenge to 21st century educators who are teaching in the midst of an educational renaissance to reach pedagogic objectives. In such scenario technology promises to provide innovative solutions in the nation's classrooms, just as it has transformed the way we communicate, socialize, and conduct business. Now it is time for us to harness the power of technology to revolutionize the way students learn and the way teachers teach. Especially for 'tech-savvy' generation who has grown up in digital world, technology provides innovative solutions to the teacher to address their learning needs.

1. Blending of Technology and Pedagogy:

Don Knezek, the CEO of the International Society for Technology in Education (ISTE), compares education without technology to the medical profession without technology.

“If in 1970 you had knee surgery, you got a huge scar,” he says. “Now, if you have knee surgery you have two little dots.”

Similarly, Technology has redefined education. Technology has more impact on education today than it ever had. Technology has penetrated deep into our educational practices. Technology should nowadays be seen as fundamental to good educational practice. (Doug, 2011). It enables teachers to expand beyond linear, text-based learning and to create 'digital learning environment' for collaborative learning. Technology is used as a 'catalyst' to engage students, deepen their understanding, expand their creativity, and help them solve problems. Its role in schools has evolved from a contained "computer class" into a versatile learning tool that could change how we demonstrate concepts, assign projects and assess progress. Innovative teachers are leading this technological transformation in our classrooms today. By the word technology I do not mean using technological tools as isolated teaching resources, it more of technology as an integral part of educational processes and practices.

The technologies are powerful, exciting, readily available, and increasingly affordable. Video projectors, interactive whiteboard, audio-visual aids, Compact discs and CD-ROMs, Hypertext. The Internet, Videodiscs, Microcomputer-based laboratories, Virtual reality, Local and wide area networks, Instructional software, Macs, PCs, laptops, notebooks, Educational television, Voice mail and e-mail, Satellite communication, VCRs, Cable TV, Interactive video, SNS (Social

Networking Sites), pod casts, educational softwares... The list of “hot” technologies flowing into the country’s school systems goes on and on. We can harness the power of technology to accomplish the pedagogic objectives.

2. Education 2.0 for Generation 2.0:

“Web 2.0” captures a combination of innovations on the Web in recent years. While in Web 1.0 era the end users functions merely as receivers of info, Web 2.0 technology brings interactivity where the users are also providers of information. It is used to encompass various novel phenomena on the World Wide Web like introduction of highly popular sites like facebook, blogs, Wikis, etc. The generation 2.0 is acculturated to Web 2.0. Today’s generation has grown up with new generations of applications and social media tools popularly referred to as Web 2.0. They have grown up in an environment in which they are constantly exposed to computer-based technology. Not only are Net Geners acculturated to the use of technology, they are saturated with it. Having been raised in an age of media saturation and convenient access to digital technologies, Gadgets, SNS (Social Networking Sites), IM (Instant Messaging), Computers are not technology for these new students. Technology is hard-wired in their psyche.

Net Geners have distinctive ways of thinking, communicating, and learning (Oblinger and Oblinger 2005; Prensky 2006; Tapscott 1998). It has been suggested that their methods of learning are different from those of previous generations. They seek for active participation, real world and relevant examples, independence and autonomy in learning. Traditional learning model is not relevant to this ‘digital natives’. Responding to the specific needs of these tech-savvy teens is becoming increasingly important. It’s a challenge for educators to evolve pedagogy to meet the needs of tech-savvy teens. By the word ‘evolving pedagogy’ I mean shifting from Education 1.0 to Education 2.0. In other words switching from traditional model of learning to technology empowered model of learning which is which is more learner friendly, process oriented and engaging. Technology can serve as a catalyst in this process of customizing education for techno-savvy teens. Today’s digital and computer technologies allow us to remedy this by giving us the tools to teach teens. The emerging technologies will not only be incorporated into the existing curriculum, but more significantly, they may indeed become the foundation of a new teaching and learning environment.

3. Emerging ‘Idea Technologies’ for Neo-Millennial Learning:

According to Veletsianson (2008), emerging technologies are tools, innovations and advancements utilized in diverse educational setting (including distance, face to face, and hybrid forms of education). The benefits of technology integrated learning are numerous. But it’s a common opinion that technology is expensive. In country like India, setting up a language lab, expensive VPs etc is a distant dream. Let’s explore some emerging ‘idea technologies’ that can be exploited to impart enriching and novel learning experience to our students.

3.1 Mobile Learning:

The term Mobile Learning or M-Learning has gained a lot of currency nowadays. M-Learning means use of PDAs, smartphones, and mobile phones for teaching-learning. Today’s generation is obsessed with use of cell phones. We find them stay glued to their cellphones for hours ‘texting’ and ‘social networking’. Students are well versed with the use of mobile phones but they may not be aware with the educational implications of these handheld device. Mobile devices or smart phones can be used to enhance teaching-learning experience in the classroom. For Example, in order to teach vocabulary to my students I adopted novel idea of smsing ‘the word of the day’ to my students. The students who used to be uninterested in learning new words in classroom, found it interesting to receive a new word everyday as a text message. Likewise, a teacher needs to develop innovative strategies to integrate handheld device in learning and teaching. Here are a few more interesting techniques for M-Learning.

Mobile Apps: Basically, anything you can do with a computer, you can do with a phone. The smart phones based on latest operating systems are treasure of thousands of mobile applications popularly known as mobile apps. These mobile apps consist of software that runs on a mobile device and performs certain tasks for user of the mobile phone. Their wide use is due to the many functions they perform. Here are some of the mobile applications for language teaching-learning.

<u>Name of the App</u>	<u>Application in Learning</u>
Talking Dictionary	thesaurus, dictionary, and translation service all in one
NewsHunt	Read all the leading newspaper on cellphone

E-Books Reader	read books whenever and wherever you would like.
Spelling Bees	Learn to spell words correctly.

Podcasts: Podcasting is a relatively new invention that allows anybody to publish files to the Internet where individuals can subscribe and receive new files from people by a subscription. Podcasts in simple terms can be called audio and video clips. It is just like an MP3 song a mobile phone or mp3 player.. The primary benefit of podcasting for educators is quite simple. It enables teachers to reach students through a medium that is both "cool" and a part of their daily lives. For a technology that only requires a computer, microphone and internet connection, podcasting has the capacity of advancing a student's education beyond the classroom. When students listen to the podcasts of other students as well as their own this can be a great tool for learning and developing literacy inside and outside the classroom. Podcasting can help sharpen students' vocabulary, writing, editing, public speaking, and presentation skills. Students will also learn skills that will be valuable in the working world, such as communication, time management, and problem-solving. Although podcasts are a new phenomenon in classrooms, especially on college campuses, studies have shown the differences in effectiveness between a live lecture versus podcasts are minor in terms of the education of the student.

Videotaping of students presentations, recording of their voice to polish their pronunciations and tone, language learning games, offline/online dictionaries and thesaurus, language learning applications, audio clips are a few implications of the amazing world of M-learning. In case of young generation known as 'texting-bees' M-learning guarantees to be fun!

3.2 Educational Software:

An educational software program is a tool for learning and teaching. It is a program that is installed into a computer in order to make use of its functions. Educational software usually makes use of vivid visuals and auditory effects. Fortunately I have the institute I work with is equipped with language laboratory. I have observed that it works as a great motivating factor for teens to learn language. For example a student may not be paying attention to while the teacher is teaching grammar in the class, the same students works with great patience and interest while

doing the language exercise on a language software. This is so because students typically are more willing to listen and perk up when the presentation in front of them are visual-oriented. This also helps in letting them comprehend a particular subject with more depth.

Sample Free Educational Softwares:

AFKQuiz : make your own quizzes.
Alice : ASlice is an innovative 3D programming environment that make it easy to create an animation telling a story, playing an interactive game or a video to share on the web.
Celestia : lets you explore our universe in three dimension
GeoGebra : interactive geometry software
OpenTeacher : vocabulary training application that helps learn a foreign language.

3.3. Digital Games:

Digital games are part of modern culture. Nearly all children play video games, and gaming is common in college, as well. Students play games while visiting with friends, listening to music, or doing assignments—and many play games during class. But games are not just for kids. In addition to their popularity in the entertainment sector, digital games are becoming important in a range of other sectors, from the military and medicine to business and education. According to Wikipedia (2006), educational games made for adults are called “serious games” whereas games made for children are called “educational games”. The field of educational games and serious games has been growing significantly over the last few years Children and youth become engaged by digital games, and it is becoming increasingly accepted that playing games also includes learning. Educational games are particularly made for a learning purpose. The digital games are being provided as tools for the classroom and have a lot of positive feedback including higher motivation for students.

3.4 Social Networking Sites:

Social Networking Sites (SNSs) are popular among many youngsters today. Online social network sites like MySpace and Facebook became common destinations for youngsters.

According to Thierer (2007), SNSs are among the most trafficked sites on the internet. A study carried out in 2007 by Anderson Analytics, a research consultancy, 80% students use Facebook and 74% access it once a week. Myspace, Facebook, Ning, Friendster, Tagged, Orkut, Xange are just some of the countless SNS available online today and new sites are constantly emerging with novel features. Realizing this many educators have embraced SNSs as a pedagogic tool. Using Facebook for e-Learning could inspire many of our students to learn The social networking sites provides platform to teen to realise the concept of ‘classroom 2.0’.

For an e-Learning course I would prefer a Facebook group instead of a Facebook page. Groups could be closed (customize group settings) and they can be used for courses and projects. On a class group page you can add links, videos, discussion threads, photos, create events and send group messages. On the other hand, pages are opened and they are used more for promotion and branding. SNSs can be used to promote

1. Interaction between Learner and Content,
2. Interaction between Learner and Instructor
3. Interaction between Learner and Learner.

Here are few possible ideas of using SNSs for E-Learning :

SlideShare: You can create and share presentation on Facebook. At the same time you can add documents, PDFs, add MP3 audio to make webinars!
Flashcards: You can create flashcards to help you study on Facebook
Files: You can access your files from anywhere and share important work files with your learners. Files is powered by Box.net.
Quiz Monster : Create your own quiz Facebook application!
Skype Me: Your learners could see when you are online (Virtual Office Hours) and talk or chat with you for free!
Books iRead: Share the books that you are reading with your classmates. See what they think!

3.5 A Classroom Blog/Wikis– Isn't it Cool! :

“I just started to use a wiki in my classroom and the kids now have the ‘tech’ fever! I work with students who have medium to mild disabilities and rarely get the same tech opportunities as our general population”.

- *An educator on using Wiki for Teaching*

Blogs or Wikis are allows teacher to create and edit web pages. You have taught a new concept in the class. Do you want your students to get engaged in learning ever after class hours are over? A step forward in the collaborative learning will be a class blog! Blog is an easy way to display your student's work. You simply type in what you want to display, give it a title and click publish. Students can not only access the content at home, but can edit, write comments and give opinions. Also, once a blog is created, teachers can post reading material, homework, assignments, student work, famous quotes, trivia games, and so much more which is not possible in 30 or 1 hour class and in four walls of classroom. In today's society, children know how to use the computer and navigate their way through a website, so why not give them space where they can be a published author. Blogs allow for students to maintain a running dialogue, such as a journal, thoughts, ideas, and assignments that also provide for student comment and reflection. Research has shown that writing blogs encourages creative writing among students.

4. Advantages of Using Emerging Technologies :

‘anytime, anywhere’ learning :Emerging learning technologies like M-Learning, Social Networking, Digital games allow students to gather, access and process information outside the classroom. The interaction beyond the confines of the classroom walls and hours is possible.

Personalised learning experience : Not all children learning styles are alike. Utilizing these technologies is the best way to reach out to students. These emerging technologies makes autonomous, individualised learning possible

Connects Classroom with the real world : Technology brings exciting curricula into the classroom that is based on real world problems, testing ideas, receiving feedback, and working collaboratively with other students.

Technology lures Youngsters to learn : Technology is inevitably a big part of teenage students' lives. This 'net generation' can be motivated, involved, and imparted joyful learning experience by wise integration of technology in teaching.

Summary:

Technology has redefined education. The world of educational technology is now not confined to using a few equipments and tools. The emerging learning technologies need to be embraced to meet the need of 'neomillennial education'. Teaching can be fantastic and fruitful when students energy and determination can be harnessed. For that technology should be embraced and education should adapt. The 'Net generation' can be motivated, involved and imparted joyful learning experience by wise integration of technology in teaching.

Bibliography :

<https://www.wikipedia.org>

<https://schoolforge.net/education-software/educational-resources>

Johnson, D. (2005). Vision for the net generation media center. Learning & Leading with Technology, 33(2), 25-26.

R.B.Barr and J. Tagg, "From Teaching to Learning-A New Paradigm for Undergraduate Education," Change, Volume 27, Number 6, pp 12-25

Johnson, D. (2005). 'Vision for the net generation media center. Learning & Leading with Technology', 33(2), 25-26.

Pete Sharma , Barney Barrett, 'Blended Learning : Using Technology in and Beyond theMacmillan_Books_for_Teachers/Blended_Learning) Classroom'.