
Emerging Trends In Teaching And Learning With Digital Technology In Higher Education

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Abstract

Teaching depends on instructors mind and conduct and instructors always experimented with the art of teaching by adopting new approaches, methods, tools and technologies. The form and medium of training has changed with the passage of time. The digital revolution has shown its effect in each sphere of existence in the current era. The boom of the internet has had a enormous effect on our lives. The quality of higher education has been accelerated through latest technological improvements. The combination of rapid technological innovation and the popularity of the Internet have profoundly changed the way students learn about the world. Advancement in Digital technology has become a prominent role in higher education at present in the global level.

Keywords- Emerging Trends, Teaching, Learning, Digital Technology and Higher Education.

Introduction

Higher Education occupies an important place at the apex of the educational pyramid because it providing man power for many areas of planning, production, management and technological development. . Society's expectations from higher education, however, have not remained the same always, but have kept changing with differing social concerns, economic situations and political conditions. India has a long history of organized education. In India, Higher Education during vedic period organized in gurukuls. During this period education was used as synonym to knowledge, humility and discipline. Face to face mode is the medium of instruction on that period. After that classroom was designed but classroom were not the sole place for learning. Higher education experienced shift from classroom with distance learning. Distance education is a non-formal education which combines in itself the new communication and education technologies. In distance education, student and teacher is separated , so use of print and various technical media like radio, audio, television, video, telephone, email, computer etc to carry out the content and bridge the distance between teacher and learners. Broadcasting media helped immensely to improve the quality of communication, However, one of the biggest draw back of this system is it only support one-way communication. With the introduction of digital technologies, distant education is now going through another layer of transformation (Valentine, 2002; Harper et al., 2004).

Due to the emergence of digital technology, traditional classroom based teaching is also experiencing a shift in teaching styles. Universities are started to offer internet access and classrooms are equipped with desktop, projects, laptop and tablets, and cell phones, are changing the scope of teaching and learning. Different platforms, such as laptops, Lectures are presented out of class through the flipped class teaching method. Technology cannot diminish the role of the teacher , when education is imparted through technology teacher is there. In educational television ,students are taught by some expert teachers. In the programmed

instruction and computer assisted instruction a student interacting with the and invisible teacher who developed the programs.

Kinds of technologies used in Teaching and Learning in Higher Education

Lower Technology: It refers to the simple media is used for teaching and learning. Example: graphic production and photographic production

Broadcasting: It can be received by any radio or television within the transmitting stations coverage area.

Microforms: Microforms are media and a technology for the storage in miniature printed and other graphic materials.

Interactive media: Interactive media is presentation of video and audio information according to the response input by the viewer.

Computer Technology: Computer based instruction is the approach of using computer technology in education . It includes computer assisted learning, programmed learning, internet teaching –learning.

Changing Scenario of Digital technology

Digital technologies are changing. It is also changing the nature of lectures. Newer technologies are allowing educators to use animation and simulation in class. The digital device and tools that are used in the teaching-learning process include: e-books/digital books, satellite, computers, television, radios, iPods, tablet, camera, digital repositories, discussion forums, blogs, e-content, e-learning, m-learning, e-mail, chat, MOOCs, OERs, LMS, online learning, online teaching, podcast, simulations, second life, virtual reality, social networking services, webinar, teleconference, e-conference, radio interactive instruction, you-tube, wiki and WhatsApp, etc.

In higher education teaching is always involved in lectures. Educators are capturing recorded lectures during or prior to a class. Instructional videos are being created by people who are coming from different professions. Free video hosting sites, such as YouTube and Vimeo, are helping to making these videos public. These sites allow students to view the lectures at and control the pace of these lectures with their their convenience and watch them repeatedly. Digital technologies are shaping the way educators demonstrate any topic. Presentation software, such as PowerPoint, Keynote, or Prezi, is changing the way educators weave a story. and it is starting to supplement or replace traditional paper-based book. Many printed books now have electronic versions, which are known as e-books (electronic books). communication methods also changed now virtual communication include email, tele-conference, and video-conference. These methods support one-to-one, one-to-many, and many-to-many communication. Open-source communication software, such as Skype and Google Hangouts, allow educators and students to communicate in real time. Forums, discussion boards, and wikis are usually used as group communication methods.

With the advent of digital technology, digital radios television are now available. They operate in digital mode, which means they use a mathematic system represented by binary numbers 1 or 0 to transmit voice, which becomes digital. The communication through educational radio programmes was primarily one-way, which means the subject experts deliver

the contents and students listen to them. Of late, there is two-way communication between the subject experts and the students. This is called the interactive radio instruction or interactive radio counseling(IRC). Today radio programmes are also available through the Internet. In the interactive radio instruction, students get opportunity to interact with the subject experts who deliver the contents, respond to their queries on the subject contents and other related aspects of the academic programme. When radio programmes broadcast through Internet, it is called as web radio. In the web radio, student has the opportunity to interact with experts via microphone and also by texting message. The educational programmes telecast through television broadcast is being done using digital mode.

Computer has a lot of applications in the field of education such as preparing digital documents, accessing Internet, communication between students and teachers, storing data, etc. In education, computers can be used for various purposes such as preparing presentations, developing documents, storing student data, accessing internet, downloading teaching materials, using social networking sites, communicating with students, teaching online, attending e-conferences, and so on. Web 2.0 technologies also operate through various social networking. The web 2.0 technologies include blogs, wikis and social media, social bookmarking, podcast/vodcast, RSS feeds and tagging. Teachers can create learning contents and post them in blogs for the access of students. The materials that are posted can be text, audio, video or multimedia. Students can also create blogs to post their creations such as literary works, assignments, project reports, and so on.

Another digital technology is wiki. In Wikipedia, we can search for any topic, and edit contents available in the Wikipedia. Similarly, you may also direct your students to update contents on Wikipedia which help them develop skill of writing and enhancing subject knowledge. Social media serve as a platform to create social networks or social relations among people who, for example, share interests, activities, backgrounds, or real-life connections. Some of the most popular social media websites are Facebook, LinkedIn, Twitter and MySpace, etc. The teacher can create student groups of the class in social media sites through which educational contents can be made available to them. This helps you interact with your students using tools available for chatting. We can use any digital tool (mobile, computer, etc) or any application software (free or paid) to develop podcast/videocast. Through podcast and videocast we can create and distributing short digital audio and video files. Another digital technology used in higher education is Rich Site Summary (RSS) In the RSS feeder the website address may be stored and whenever any new entry is made, the message about that particular website is shown on the RSS feeder. This helps teachers and students get updated knowledge about their subjects, and information about various courses, etc. Social book marking helps students and teachers to access materials at a later time. Teachers bookmark materials for the use by students and they share the materials among them.

Digital technology has changed the way of organising conference. Now there is no need to travel to any specific location. We can use the Internet connected digital devices to organise the conference. In e-conference, people are present to discuss matters of their interest in a virtual space. So, any one located at any place of the world can attend the conference through the Internet connected electronic devices such as computer, mobile, iPad, etc. In econference,

People can see each other through video call facility; share files, attachments, audio and video files; make presentations; discuss among themselves, etc. E- conference is also known as e-meeting, web conference, web seminar, webinar, etc.

During Corona Period mobiles are also used for various other purposes such as audio/video recording, capturing photos through camera, multimedia messaging, playing games, document viewing, accessing the Internet, making bank transactions, online trading, online booking, paying bills, communication via social media, storing files and so on. When mobile device is used for teaching-learning, it is called mobile learning or m-learning. Students can use, study and learn those materials at any place and any time as per their choice. The importance of mlearning is increasing owing to the easy access to mobile devices. Also, the mobile devices are small, handy and less costly as compared to other digital electronic devices. Students can also work collaboratively, share materials and access information. Another digital technology is Augmented Reality and Virtual Reality is a tool used for immersive and experiential learning.

NEED FOR DIGITAL TECHNOLOGY IN HIGHER EDUCATION

Digital technologies can drive collaboration and group problem solving. Digital Technologies can help students learn in way they find most effective and broaden their repositories for learning. They can supply structure for students who need it more open ended for students who don't fast, bright students can move quickly through materials they master easily and go on to more difficult tasks. Aided by digital technologies, students with similar motives and talents work on groups without constraints of time and pace. The ways in which digital technologies provide feedback are many and feedback inherent in simulations. Now a days email, computer conferencing, and world wide web increases opportunities for students and faculty to converse and exchange work more speedily than before. Digital technologies that increases access to faculty members and help them to share useful resources and provide for joint problem solving and shared learning can usefully augment face to face contact in and outside of class meetings.

IMPACT OF DIGITAL TECHNOLOGY IN HIGHER EDUCATION

There has been a paradigm shift in learning and teaching in higher education. Innovative technology access entirely new ways of thinking and of working. Digital technology is entering higher education through a number of path including virtual education, changes to pedagogy and Institutional efficiencies .Digital technology is changing the way faculty teach and students. Despite the decades of research in this area, higher education has not made much progress towards incorporating digital technologies that are state of the art. However nowadays digital technologies are useful for drills, simulations, shallow interactions and creative projects. We need to think carefully about who should be using technology at what age, and for what learning exercise because there are appropriate and inappropriate use of digital technology in education. One of the major contribution of digital technologies to education is the individualization of learning.

CONCLUSION:- Higher education is undergoing a fundamental transformation from the traditional methods to digital technology. With the widespread use of ICT, teachers are

increasingly use modern digital resources that enable students to effectively engage in the learning process. Apart from the new digital resources like blog, wiki, social networking sites, internet, e-book, e-conference, etc., traditional digital devices like radio, television are also used in teaching-learning process owing to their advantages in making learning contents available to wider population. Digital technology allows higher education to offer a greater variety of courses to more students and to provide them with a level of support that was not always possible with in-class teaching. Digital technology also allows high quality teacher to reach many students. It sharpen students cognitive, skill of analysis, synthesis, application and evaluation. It encourage self reflection and self evaluation. However one of the major obstacles facing remote learners in India is internet and bandwidth access, especially in the country's more rural areas.

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