



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2019; SP4: 254-257

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(Special Issue- 4)
One Day National Seminar
“DIGITALIZATION OF HIGHER EDUCATION”
(2nd March, 2019)

Impact of digitalization in the distance education

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Abstract

India is a vast country with much diversity – in culture, language, heritage etc. and so is its education system. We have institutions with all digitized air-conditioned classrooms as well as the transportation; There are institutions which believe in emphasizing on value education by following Guru Kul system where students are taught under the trees despite of having world-class infrastructure. At the same time there are institutions which emphasize on books and physical development of students by conducting in-house activities whereas others can afford international exchange programs and have been able to send their students even to NASA. At the same time we have institutions where students struggle for books. India holds an important place in the global education industry. The country has more than 1.4 million schools with over 227 million students enrolled and more than 36,000 higher education institutes. India has one of the largest higher education systems in the world. However, there is still a lot of potential for further development in the education system. India's online education market size is expected to touch US\$ 45 billion. An RNCOS report titled, Booming Distance Education Market Outlook 2018 expects the distance education market in India to grow at a compound annual growth rate (CAGR) of around 34 per cent during 2013-14 to 2017-18. Moreover, the aim of the government to raise its current gross enrolment ratio to 30 per cent by 2020 will also boost the growth of the distance education in India. In the present article major focus is on the impact of digitalization on the distance education.

Keywords: Digitalization and Distance Education

Introduction

The emergence of digital technologies and their penetration into all levels of education, from nursery schools to universities, has challenged higher education institutions to redefine their teaching and research practices and to redesign their organizational infrastructures. The digital technologies are applied in higher education institutions in teaching/learning processes: retrieval from various resources; simulations and multi-media presentations; communication with instructions in –and after classes, communication amongst students; drilling exercises and sample tests; class administration, etc. (Guri-Rosenblit, 2009)^[11].

The new information and communication technologies have become of immense attraction to distance teaching institutions since they offered solutions to three major obstacles in traditional distance education. They have the potential: to rescue the scattered students from their loneliness by providing interaction with teachers, as well as with other peer students; to provide easy access to libraries and other information resources which was nearly impossible in the past; and to update the study materials on an ongoing basis. In spite of the apparent advantages of the digital technologies for distance education, many of the distance teaching institutions lack the appropriate infrastructure and necessary conditions to utilize the full potential of the new technologies. The fact is that today most of the large distance teaching universities do not offer distance education through e-learning devices, and most of the e-learning applications are used by conventional higher education institutions not for distance teaching purposes (Bates, 2005; Guri-Rosenblit, 2009; OECD, 2005; Trucano, 2005)^[3, 11, 21, 23].

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Since a few years back there has been a vocal debate on the digitization of higher education. Most often, this debate has focused on the positive opportunities associated with digital massive online courses (MOOCs). However, objections have been raised, arguing that the disruptive potential of digitization has been overstated and is the result of tendentious research (Lepore, 2014; Daniel, 2012) [18, 5]. Nevertheless, it is clear that traditional content industries like magazine publishing (BarNir, Gallagher and Auger, 2003) [2], publishing houses (Driver and Gillespie, 1992) [6], libraries (Humphreys, 2015) [15] and the music industry Andersson, Lahtinen and Pierce (2009) [9] has been subject to strong pressures to reconfigure business models based on traditional means of distribution to digital means of distribution. Even though the verdict seems to stand clear that digitization of higher education will take longer time than suggested by some proponents (Economist, 2015) [8], it is equally clear that long-term planning of higher education needs to consider the opportunities of digitization (Economist, 2015) [9].

Digitalization

Digital learning is any type of learning that is accompanied by technology or by instructional practice that makes effective use of technology. It encompasses the application of a wide spectrum of practices including: blended and virtual learning. Researchers have reached to this conclusion that technology integration involves the educators' and students' seamless use of technology as a tool to complete a task in a disciplined study that promotes higher order thinking skills. The incorporation of technology in the classroom is a process that involves change in an educational system and occurs over a period of time (NCES, 2002).

Jani and Tere (2015) [24] discussed that digital India programme introduced by government of India is important for the development of digital education in the country. Digital India drive is a project initiated by Government of India for creation of digital empowered society across the country. It will help in mobilizing the capability of information technology across government departments and helps in delivering the different governments programs and services. Digital India will help in creating job, providing high speed internet and digital locker system and so forth. Digital India has three important components namely digital infrastructures creation, digital delivering services and resources and digital education. Dua, Wadhawan and Gupta (2015) have discussed the different issues, trends and challenges of digital education in India and suggested the empowering Innovative classroom model for learning. The future trend of digital education includes digitalised classroom, video based learning, and game based learning and so forth. They have pointed out different challenges of digital education India and suggested measures to overcome these challenges.

Goswami (2016) [25] highlighted the different opportunities and challenges of digital India programme in India. Digital India programme introduced by government of India will help in transforming country into a digitally empowered economy. This will help government of India to integrate the Government Departments with the people of India. The main purpose of this programme is to reduce the paper work and help in providing different Government services electronically to citizens. It describes the different

opportunities of the programme for the people of the country. India is having different languages, culture, and customs, food habits, laws and traditions. The purpose of digital India programme is to integrate whole country digitally but languages would be the main challenges in the implementation of such programme (Patel, 2017) [26]. There are many web based tools which can be used in the classroom for digital education like twitter, Glogster, Prezi, Diigo, Dropbox, and Moodle. Teachers and students are interested in web based digital learning but because of lack of knowledge they are not initiating the same. Web based tools will make the learning interesting and students will get motivated which normal classroom cannot do. Currently the teacher centric approaches are making learning boring even for interesting chapters, use of digital technology makes even boring content interesting and joyful. The concept of child centered approach will be fulfilled only with the help of digital technology.

Distance Education

Education is a lifelong learning process. In other words, learning begins from the birth and ends with the death of the person. Among other things, education entails the ability to read and write. Also, education inculcates desirable human traits like honesty, sincerity, hard-work, punctuality, productivity, innovation, patriotism, selflessness, etc. Furthermore, education empowers people by inculcating lifelong skills and know-how, thereby giving an individual the capacity to liberate oneself from poverty and want. Education, when well imparted and utilized, has the potency of promoting national security. This is because national security covers the socioeconomic, political, military, cultural, familial, industrial, diplomatic, and artistic spheres of a nation (Athique, 2013).

In order to meet challenges of access and equity to higher education for large segments of the population, and in particular, the disadvantaged groups such as those living in remote and rural areas including working people, housewives and other adults who wish to upgrade or acquire knowledge through studies in various fields, academic institutions and government sector were looking for an alternative system of education that can provide access to learning of information as well as a degree for recognition like traditional system of education. On March 20, 1728 there was an advertisement in the Boston Gazette by "Caleb Phillips", a teacher of the new method of short hand (Holmberg, 2005) [13]. The statement of the advertisement was "persons in the Country desirous to teach this Art, may by having the several lessons sent weekly to them, be as perfectly instructed as those that live in Boston." This advertisement showed that communication via mailing system can be used to spread education to the learners when the source of information is separated by time and distance or both (Honeyman & Miller, 1993) [14].

This kind of educational system which is open to all is called Open and Distance Learning (ODL) educational system. The first university in the world that started to offer distance learning degree, establishing its „External Programme“ in 1858, was The University of London. To provide opportunities of higher education to all sections of the society and catering to the changing individual and social needs in India, the State Govt. of Andhra Pradesh for the first time established the „Andhra Pradesh Open University“ on 26 August 1982 through APOU Act 1982.

This University was renamed as Dr. B.R. Ambedkar Open University on 7th December 1991 by the Government of Andhra Pradesh (APOU Act, 1992). In 1985, the Union Government took initiative for establishment of a National Open University and on 20th September 1985, Indira Gandhi National Open University (IGNOU) came into existence. Apart from the above two open universities, we have another 12 State Open Universities and 140 dual universities offering programmes /courses through the distance mode. Thus about 40% universities in India are offering distance education. To maintain educational standard and strong co-ordination among all ODL institute, Distance Education Council (DEC), was established in 1991 under section 16(7) read with Section 5(2) of the IGNOU Act, 1985. Since then DEC, as an apex agency, was responsible for recognizing ODL institutions in India. It was mandatory for all institutions to seek prior approval of the Distance Education Council (DEC) for all existing and new programmes offered through distance mode. From 4th May 2013, IGNOU through a notification repealed and deleted the statute that provisioned for the Distance Education Council(DEC). From this time UGC has become a regulatory authority for higher education through open and distance learning mode (ODL). As a result, instead of requiring Distance Education Council (DEC) recognition, approval of UGC will be required now (Kundu, 2014) [17].

Impact of Digitalization on Distance Education

- (i) **Learn at Own Pace:** Digitalized learning offers the learners the opportunity to study at own pace, learners have the opportunity to learn at any time, from anywhere at their own pace. According to Hegarty (2006) [12], students report benefits of using learning technologies such as the ability to learn at their own pace, to learn independently and to have fun. With the help of technology for online teaching and learning the materials can now be accessed from a computer or from mobile devices. This has created more opportunities for the learners.
- (ii) **Promotes Interaction:** Digitalization offers the opportunities to promote interaction between learners, learners and lecturers as well as with experts. One of the research shows that interaction can increase learning and lessen the psychological distance involved in digitalized learning (Mayes, Luebeck, Ku, Akarasriworn, & Korkmaz, 2011) [20]. Similarly interactions can help in achieving the learning outcomes and thus ensure successful learning; interactions can be facilitated in digital learning through effective usage of technology. The use of interactive technology with the affordances of two-way communication and multiple representations may provide more interactions for online learners, and thus lead to enhanced learning outcomes (Hyo-Jeong, 2010) [16]. Interaction in turn can promote students motivation and can enhance the whole learning process. Croxto (2014) [4] online courses with high levels of interactivity lead to higher levels of student motivation, improved learning outcomes, and satisfaction over less interactive learning environments.
- (iii) **Promotes Higher-Order Think Skills:** According to various researchers, technology can promote critical thinking and problem-solving skills among learners which are required in the 21st century. Online lecturers can make use of various technologies such as Google

Docs, Discussion Forums in Blackboard and create various activities that can help to develop the critical skills of learners (Mansbach, 2015) [19].

(iv) Opportunities for Real-Time Student Assessment:

Technology allows the lecturers to monitor their learners continuously, the progress of the learners in terms of reading, participation in discussion forums and even the amount of time spent on the virtual learning platforms. Digital technology makes it possible to monitor how long students devote to readings and videos, where they get electronic resources, and how quickly they master key concepts (West, 2012) [27].

During the deep study of the literature on digitalization in distance education it is observed that with the emergence of digitalization in distance education increased the scope in higher education through distance mode by

- Establishing ongoing support systems
- Utilizing Open Educational Resources (OER)
- Utilizing Massive Open Online Courses (MOOCs)
- Utilizing Study Webs of Active Learning for Young Aspiring Minds (SWAYAM)
- Redefining teaching workload
- Online tutorial classes
- Lectures through video conferencing
- Coverage of large geographic distance through technology
- Valid sources of information
- Providing opportunity for Self-education.

Some of the Limitations of Digitalization in Education

Polglase (2018) [22] pointed some limitations of digitalization in education as following:

- **Shortening Attention Spans,** with multitasking now common in schools. This includes presentation of multiple sources of information on a single monitor screen, working on several open windows, using interactive whiteboard technology and engaging in activities in online or video game formats.
- **Duration of Use of Digital Devices** - emerging as a risk for cognitive and social development. This includes increased distractibility for younger children and addiction-like behaviours for older children.
- **Cyber Bullying** among children and adolescents is a growing concern in schools, increasing dropout rates and affecting academic performance. Access to digital devices is increasing both the nature and the prevalence of bullying.
- **Altered Leisure Patterns** affecting physical health (e.g. contributing to obesity).
- **Communication Changes** - from artificially extended 'friend' networks, to anonymity. These changes in communication are breaking previous social norms.
- **Selfie culture'** and the sharing of previously private matters with a potentially global audience.
- **Sexualising practices** in children, including sexting, with unknown consequences.
- **Information overload and fake news.** Students need the skills needed to cope with vast quantities of information, while also critically evaluating that information.

Gond and Gupta (2017) [10] also pointed some challenges in digital education such as

- Resource and internet connectivity related challenges.

- Shortage of trained teachers.
- Language and content related Challenge.
- Poor maintenance and up-gradation of digital equipment.
- Insufficient funds.

Conclusion

From the above whole discussion it is concluded that digitalization in education brought a paradigm shift in the learning through distance mode. The scope of learning increased for broader geographic distance area. With the digitalization of higher education in particular distance education, assessment system improved, quick feedback system enhanced, and active interaction with learners enhanced. There are many advantages of digital learning but still there are many challenges to adopt digitalization in higher education.

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