Harpreet Kaur
Assistant Professor,
Department of Education
(B.A,B.Ed) SDP College for
Women, Ludhiana, Punjab,
India

Emerging issues and challenges in digitalization of higher education

Harpreet Kaur

Abstract
With passage of time, the education system all over the world has gone through a dramatic change. The traditional education system no longer fulfills the modern day complex needs where everything is dynamic and evolving at a very fast pace. There is a huge amount of transformation that takes place in the present world in every nanosecond. Therefore, a new and modern way of education is required to handle such transformation arising as a result of creation of huge amount of information in a systematic manner. Thus, to resolve the shortcomings of the traditional education system, the world is moving towards digital education which addresses all the issues and challenges of traditional education. Digital Education can be defined as the use of a combination of technology, digital content and instruction in the education system to make it more effective and efficient than the traditional education system. Through this research paper, an attempt has been made to discuss the upcoming trends, benefits and challenges in digital education system that will shape the future of our coming generations for the better.

Keywords: Digitalization, higher education

Introduction
"Digitization is the integration of digital technologies into everyday life by the digitization of everything that can be digitized."

Digital education means digital learning. It is a type of learning that is supported by digital technology or by instructional practice that makes effective use of digital technology. Digital learning occurs across all learning areas and domains. Digital education gives win-win opportunities for all, at one side school, colleges and other institution finds the rapid rise in enrolments and added revenue because of digital education and on other side students views this as a flexible and alternate option allowing them to study as per their convenient time and pace. Teachers and professors too find it convenient to prepare their teaching plans aided by digital technology. Teaching and learning becomes a smoother experience as it includes animations, gamification and audio-visual effects.

Over the last few years digital education in India is evolving at faster pace. It is changing the way students learn different concepts and theory in school and colleges. The traditional chalk and talk method in school and colleges has been slowly changing with more interactive teaching methods as schools and colleges are increasingly adopting digital solutions.

Digital learning guarantees more participation from students as the current generation of students is well-versed with laptops, I-pads, and smart phones. There are different private players in the field of digital education like Educomp, Tata class edge, Pearson, and Teach next who are continuously engage and developing different interactive software to help teachers in classroom teaching.

Correspondence
Harpreet Kaur
Assistant Professor,
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Women, Ludhiana, Punjab,
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I. Emerging Trends of Digital Education

➤ **Digitalized classroom:** A complete revolution in the way we learn today has been brought by Technology. Teachers teaching in the classroom can capture the students and the full strength in the class by digital screens, thus facilitating each child to get the same base content and input from the teachers. This feature of digital era has increased the student engagement as it combines various instructional styles. Each student gets in contact to world-class education, which is not easy to impart by the traditional white chalk and black board teaching. This new learning is more interesting, personalized and enjoyable. With this technological inclusion in the school teaching the students feel studying as enjoyable, easy, competent and above all interesting. The aim of a teacher however should be to create such an atmosphere which makes every students want to study.

➤ **Video based learning:** Video-based learning as a part of digital marketing has geared up in Indian Education Sector and has made education engaging, entertaining and exploring. It enables learning with a pedigree of learning out of leisure with creativity, fun and entertainment on cards via the wonderful Apps, podcasts, videos, interactive software, e books and online interactive electronic boards. Children are excited and operative with interest to manage the showcase via their intelligence, exploring the weak techno skills of teachers and assist them in public with pride and honors and recognition.

➤ **Massive open online course (MOOCS) & other distant learning programs:** A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. India is considered to be the biggest market for MOOCs in the world after the USA. Since the population of India is huge, massive open online course (MOOC) are said to gateways for a lot of Indians in terms of bringing an educational revolution. Online distant learning programs give a great opportunity to avail high quality learning with the help of internet connectivity.

➤ **K12 sector Game based learning:** K-12 School is a terminology used as Kindergarten through XII grade. Various start-up companies have been the contributor for this sector. Today the world is of Y-generation people who are acquainted with the technological developments taking around them, and they are also surrounded with the required skills and abilities. K-12 creates the game based learning environment, which enables the learner to easily get the word of education in India and give us a better self-trained Y generation.

II. Benefit of Digital Education

1. Benefits to Academic Institution:
Academic institution can easily manage their activities with the help of digital education. Some of the important benefits are:
- Time and money of the Institution will be saved.
- They can easily plan to conduct online exam and publish the exam results quickly.
- It makes knowledge to transfer easily and equally from teacher to each and every student with the help of effective and advanced technology based teaching tools.
- It helps in creating interest among student which will help them in learning many concepts through interactive- audio-visual teaching contents.
- Advantages over other schools and colleges which cannot provide such integrated feature-based learning and management system.
- Easy communication between Institution and parents for student related academic activities.

2. Benefits to Students
As all the study contents will be taught in the classroom through multimedia slides, it creates interest and enthusiasm among the students. Learning will be fun for them. They are able to memorize many concepts through interactive audio-visual teaching contents. Some other benefits to them are:
- They can easily view their daily time-table, class assignments, any events planned in school etc. from home.
- They are able to prepare projects and presentation online.
- They can give online exam and view their results.
- They can easily collect teaching contents of missed lecture online.
- They can access library online.

3. Benefits to Parents
In today's world, it is difficult for parents to visit the school or colleges because of their busy work schedule. Digital education helps the parents to view all the information of their ward from comfort of their home or office. Some of the other benefits are:
- The web facility of digital education helps the parents to view their child's attendance record, progress in syllabus, timetable, etc.
- They can easily check the subject taught in school, homework given to their ward, any future assignments and projects and guide the ward accordingly to participate and practice.
- Easily view internal and semester exam schedule and results.
- They can easily pay the school fees and other activity charges.
- They can get information on various school events, notices, holidays and can track the presence of ward in the classroom /outside the class.

4. Benefits to Teachers
Digital in education also creates interest among teachers. It helps them to make teaching interaction among students very effectively. Some other benefits are:
- It helps the teacher to manage their class time and teaching content effectively.
- They can easily avail the school as well as class related information through web.
- They can check daily time-table, assignments, teaching history, events and holiday list, self as well as student attendance etc.
- It will help in explaining the difficult content easily and in effectively.
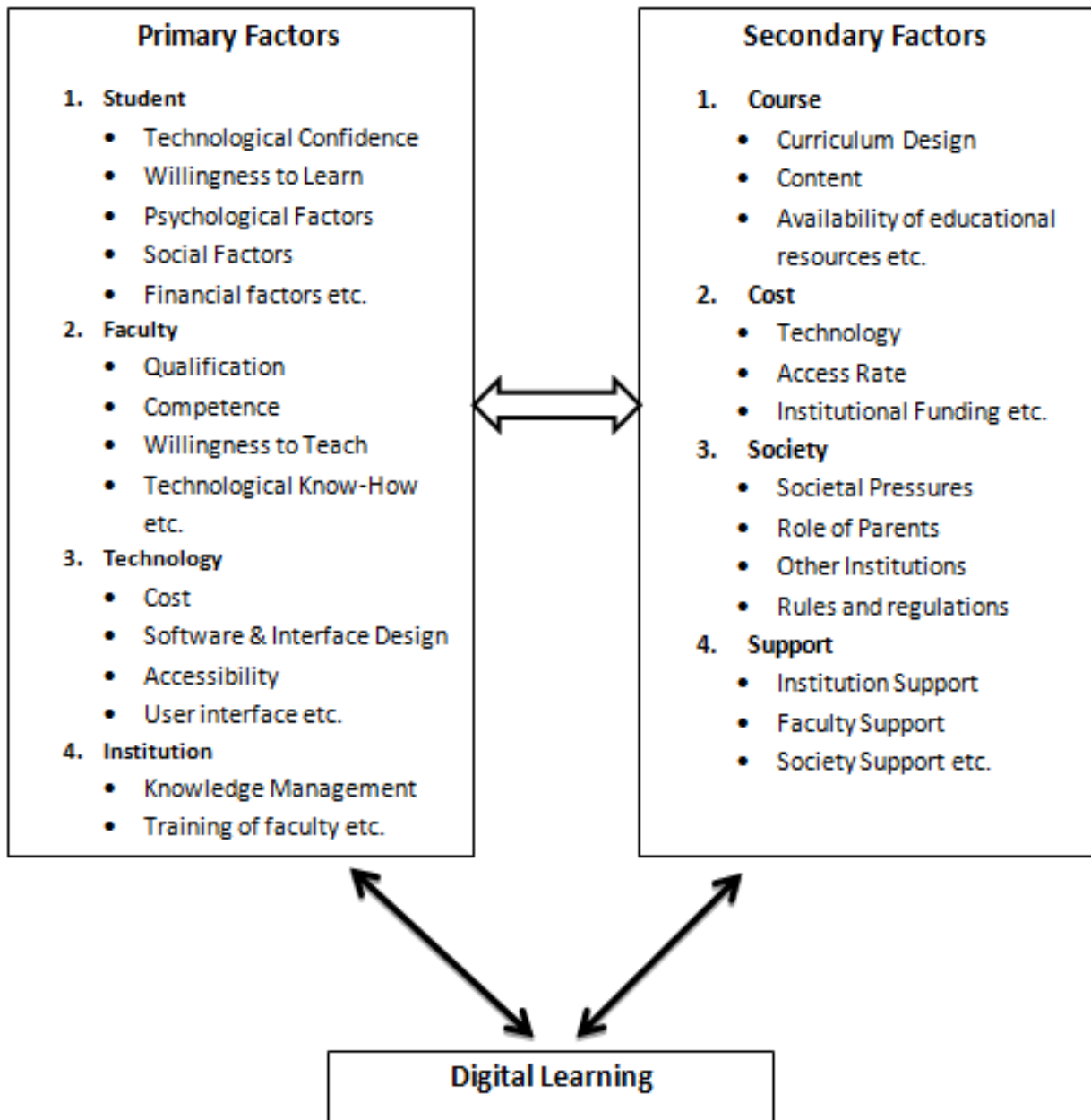
5. Benefits to Principals
Some of the important benefits to principle are:
- Easy to manage all the school/college activities.

- In case if the he is on leave, he will be able to access all the school information online and manage the school easily.
- He can view teachers' teaching progress and students' performance.

- It will helps in allocation of class and subject to a teacher according to his/her interest and experience.
- He can assign tasks to other staff members and give remarks for their works.

Model of facilitating factors for Digital learning

Primary Factors

1. **Student**
   - Technological Confidence
   - Willingness to Learn
   - Psychological Factors
   - Social Factors
   - Financial factors etc.
2. **Faculty**
   - Qualification
   - Competence
   - Willingness to Teach
   - Technological Know-How etc.
3. **Technology**
   - Cost
   - Software & Interface Design
   - Accessibility
   - User interface etc.
4. **Institution**
   - Knowledge Management
   - Training of faculty etc.

Secondary Factors

1. **Course**
   - Curriculum Design
   - Content
   - Availability of educational resources etc.
2. **Cost**
   - Technology
   - Access Rate
   - Institutional Funding etc.
3. **Society**
   - Societal Pressures
   - Role of Parents
   - Other Institutions
   - Rules and regulations
4. **Support**
   - Institution Support
   - Faculty Support
   - Society Support etc.

Digital Learning

IV. Challenges of Digital Education

Digital Learning has become very popular with period of time. But it imposes certain challenges which need to be overcome. Someone rightly said, *"Digital learning should be more about the human touch that just machines".* Some of the major challenges for digital education in India is:

- **Resource and internet connectivity related challenges:** One of the main challenges for digital education in India is poor internet connectivity in rural areas and some part of urban areas. Majority of population across India has still no access to internet and a large population in rural areas is still illiterate in the field of digital technology.

- **Shortage of trained teachers:** A major obstacle in the use of digital education in rural area is the lack of knowledge and skills. There is a shortage of teachers, formally trained on digital technology. In some of the academic institution in rural areas, school teacher and college professors are not interested in using digital tools for conducting classes. They feels that a lot of information is explained to the students at one go through the digital medium and they prefer traditional teaching methods of chalk and blackboard.

- **Language and content related Challenge:** Languages is one of the main barriers for the development of digital education in India, there are several different

languages in different state have been spoken all across country, pushing all the digital content in all these regional languages some time becomes difficult for the agencies.

- **Poor maintenance and upgradation of digital equipment:** In rural areas maintenance and upgradation of digital equipment is one of the major challenge. This is largely due to budgetary constraints by government. The digital education projects in rural schools are not self-sustainable. At initial stage various projects have been launched by government for the development of digital education, but later, they have not been taken due care for the maintenance of digital equipment which is affecting the digital education development in rural areas.

- **Insufficient funds:** Digital education involves effective and efficient usage of appropriate and latest hardware and software technology available in the market. In developing countries like India, digital technology implementation into education systems is a difficult task as it requires huge funds and infrastructure. Through Digital India programme, the government has promised availability of funds for technology implementation but lack or insufficiency of finances leads to redundant and obsolete infrastructure and equipment's in rural areas.

- **Resistance to change:** Every improvement has two sides of coin, with one leading to advancement and development and other relates to certain challenges associated with the implementation of this advancement. Unfamiliarity of teachers towards technology is one of the biggest challenges of Digital Learning, which the managers need to work with it. People commonly resist change, even if the changes are superior to what they had previously.

- **Learners Motivation:** Classrooms which are run in the form of a seminar and discussion have the advantage of accountability and supervision. One of the common challenges in digital Learning is that, left to their own devices, employees may not explore the course material. Even worse, employees may resent using their own time to do coursework, rather than enjoying the "vacation" from their everyday responsibilities afforded by an in-person seminar. Therefore, it becomes rather important and a big challenge on how can we keep our students motivated enough to complete the course and moreover, how can we make them enjoy the learning experience?

- **Evaluating effectiveness:** Yet another important challenge of Digital Learning is the task of determining whether the course is having the intended effect. In the absence of pop quizzes and report cards, how can an employer tell whether the eLearning implementation is achieving its goals?

Conclusion
With so many different ways to define e-learning and the educational approaches that can be taken in these learning environments, it is the conclusion that e-learning is an innovative approach to learning. It is a holistic way of teaching and learning that meets the needs of today's digital natives. It is an environment made up of collaboration, choice, and an array of technological resources that supports a successful online learning experience. However, in order for learners to be successful in this learning environment the challenges to e-learning must be overcome with support and a best practice solutions. Instructors and learners must embrace the shift away from traditional classroom practices to an e-learning approach to education. Despite the fact that today's learners are digital natives, the use of technology for e-learning can be overwhelming and provide student motivation challenges however, with the proper supports from instructors, learners can be successful within these e-learning environments. Finally, and probably the most important challenge for the instructor is to focus on the overall elements of a well-developed course. Developing a purposeful and well-defined online course, which supports the instructor and learner, means devoting the appropriate time and embedding the applicable course elements into the e-learning environment.

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