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Anita Goyal
Assistant Professor, Moga
College of Education for Girls,
Ghall-Kalan, Moga, Punjab,
India

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**Digital education in Indian society: Emerging trends
and challenges**

Anita Goyal

Abstract

Education in recent times has witnessed remarkable changes, primarily because of digital revolution which is taking place all over the world. Digital education is a kind of learning supported by digital technology that makes instructional practice effective. On the behalf of students, it guarantees active participation as the current generation is well-versed with the use of digital gadgets. From the view point of teachers, it enables them to get acquainted with recent concepts. On the one hand as well as to plan their daily classroom teaching by taking into consideration the psychology of individual differences. But, one must not conclude that digital aided education is perfect substitute for traditional classroom teaching learning practices. This is only the teacher who can decide which type of digital aided educational experience will be suitable to the learners as per their class and learning requirements. Moreover, adequate finances, trained faculty, political will, internet connectivity, maintenance of digital technology are also other related areas which needs to be strengthened in order to make effective implementation of digital aided educational experiences really a success.

Keywords: Digital education, learning, classroom

Introduction

Digital Education

Digital education means digital learning. It is a medium that includes the combination of modern technology and electronic gadgets. Digital learning is possible in schools, colleges and in all other fields. It is an online platform for learning that converts normal classroom and makes learning easy by pictorial and image representation of the subject or topic with lots of examples for students. Digital education is the modern technology that facilitates us to introduce elements of gamification in to the education process. It helps to improve student concentration and information retention as well as their ability to do their on research and work in teams. It encourages students to find content that they like. Digital education is important for students in all spheres of education.

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.

Benefits of Digital Education

- Digital Education helps the students to be more attentive.
- It helps to make their education more effective and efficient.
- It helps to make students pay more attention to subjects.
- It provides video based education for better understanding.

Correspondence

Anita Goyal
Assistant Professor, Moga
College of Education for Girls,
Ghall-Kalan, Moga, Punjab,
India

- It provides students the facility to study at their convenience at any time and place.
- The students can use exclusive study modules of various subjects, which help in enhancing their knowledge even without a teacher.
- Through this, students who missed certain classes or section can easily access the class notes and download files from school website.
- Students, who hesitate to ask questions to teachers in classrooms, can easily attend the recorded sessions to clear their doubts.
- Parents can also get information on various school events, notices, holidays and can track the presence of their ward in the classroom.

Emerging Trends of Digital Education

- **Digitalized Classroom:** Teachers teaching in the classroom can capture the students and the full strength in the class by digital screens. Each student comes in contact with world-class education, which is not easy to impart by the traditional white chalk and blackboard 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 student want to study.
- **Degree Certificate for Online Courses:** Universities should provide a valid, official certificate for courses completed online. This change should be credited. Once this change is accepted, all the certificates and degrees will carry equal value.
- **3D Space Learning:** The 3D space allows students to transform digital evidence into reality. In future, the regular labs in many universities will be replaced with 3D labs. Shortly, the pilot-phased 3 D printing will prove as a useful learning method, allowing students to explore 3D technologies and devices.
- **Usage of Virtual Reality (Vr) and Augmented Reality (Ar) For Learning:** VR and AR are already buzzwords in the technology space. VR allows students using e-learning platforms on mobile devices to directly interact with study material. This keeps their engagement levels high and motivates them to learn more and better. On the other hand AR facilitates teachers and trainers in performing tasks.
- **Mobile Based Learning:** It has offered students the flexibility to access educational content seamlessly across multiple digital devices like desktops, laptops, tablets and smart phones. Most educational content, including even online courses, will be optimised entirely for Mobile devices.
- **Video Based Learning:** It is a part of digital marketing has geared up in Indian education sector and has made education engaging, entertaining and exploring. Video lectures allowed students to learn subjects' syllabi at their own pace and dedicate time spent in class towards interactions. This will continue to be a trend in the future where students will have access to rich and interactive context that will be useful for both formal training as well as performance enhancement.
- **Massive Open Online Course (Moocs) and Other Distant Learning Programs:** A massive open online

course 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. Online distant learning programs give a great opportunity to avail high quality learning with the help of internet connectivity.

- **Game Based Learning:** K-12 creates the game based learning environment, which enables the learner to easily get education in India and gives us a better self-trained Y generation. It is a terminology that is used as kindergarten through 12 grades.

Challenges of Digital Education

Some of the major challenges for digital education in India are:

- **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. More Innovations required to make the digital education more interactive.
- **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 schools.
- **Poor Maintenance and Up Gradation of Digital Equipment:** In rural areas maintenance and up gradation 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.
- **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.
- **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. In rural areas, primary teachers and senior teachers are reluctant to get trained and adopt digital technologies for digital

education in school because they are in view that these disruptive technologies are out to replace them permanently.

- **Lack of it Support:** As your school uses more technology, you will need increase your IT department. More use of technology means stress on the IT department; hence you should not expect one person two handle the added responsibility.
- **School Community Resists Change:** It is hard to change the way you teach when you have been using the same tools for your entire teaching career. Therefore, it is important to provide plenty of information, statistics and examples to show the community these tools should be implemented in the classroom.
- **Technology Continuously Changing:** Unfortunately, technology is always changing, so you should not expect to be using the same tools forever. Instead, you should have a plan and budget in place for upgrading technology.
- **Lack of Quality Content:** With the amount of digital content, it is overwhelming to create a collection of high quality digital learning materials independently.
- **Not a Substitute for Human Interaction:** Even as humans begin to use virtual assistants more regularly, they are still no replacement for human interaction. Teachers should not step aside. Instead teachers should use digital resources as supplemental and complementary tools for the classroom.
- **Unequal Access for All Students in and out of School:** Even if your school has wifi and a great collection of digital tools, it does not mean the student population has these devices when they go home. To overcome this challenge, some schools are providing students with laptops or tablets.
- **Software is not optimized for Mobile Devices:** Many students do not have internet access at home, so they use their cell phones for internet access. Therefore, it is important to make sure all your digital resources optimized for mobile devices.
- **Security Issues:** More activity leads to more security issues. To combat security issues, your school should invest in security. Additionally, students and teachers need to be taught the basic about internet safety.

Conclusion of Study

Education sector in India has seen a series of rapid expansion in last couple of years which helped to transform the country into a knowledge haven. The study clearly points that development of education infrastructure is required for the development of digital education across the country. This will lead to considerable increase in infrastructure investment in the education sector. Democratic governance, English speaking tech-educated talent and a strong legal and intellectual property protection framework are required for the development of digital education in Indian society. Government of India has also taken major Initiatives for the development of digital education in India like opening of IIT's and IIM's in new locations as well as allocating educational grants for research scholars in most government institutions. Digital literacy scheme to be launched for covering six crore additional rural households. The Government of India has further announced plans to digitise academic records such as

degrees, diplomas, mark sheets, migration certificate, skill certificate, etc. from secondary to tertiary-level institutions into a National Academic Depository (NAD). The study highlighted the different challenges of digital education in India. Government of India needs to take the required measures to overcome these challenges for the development of digital education in India.

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