

A Study on Digital Education in India Challenges and Scope

Ruksar¹ & M. Khan²

¹Assistant Professor (M.Com Department)

²Anjuman Arts and Commerce College, Belgaum (Karnataka)

ABSTRACT

Traditionally education is centered on sources such as schools, teachers and print media. The learners reached the information sources by enrolling with schools, teachers and libraries. Prior to the digital era, information was not accessible by the majority of people, and even those accessed were unable to obtain current information with respect to today's context. The modern society wants to know the information as it happens and when it happens, and the world is moving from an information society to a knowledge society. Thus education is given the highest priority and brainpower is becoming the most valuable asset of an organization. Advances in digital technology have opened up many avenues of learning. Technology has made information accessible / transmittable from anywhere and by / to all groups of people. Education has reached most parts of the world and ICT has become an integral part of human life. This paper describes the process of generation, creation and acquisition of knowledge through the technology.

Keywords: Education System, Digital Learning, Technology, Digital Education.

I. INTRODUCTION

The role of technology in education has been an important question since the potential of computer technology to transform Skinner's teaching machines was recognised in the 1960s. It remains an important issue today with debates about the impact of technology on our society, the implications of quick and easy online access to information for knowledge and learning and the effect of technology on young people's social, emotional and physical development frequently in the news. It is therefore important to take stock of what we know about the impact of digital technology on education from what we have

learned over the last fifty years. Appendix 1 sets out a number of these issues in terms of some contemporary myths about the effects of technology. The main approach used to evaluate the impact of technology on teaching and learning in schools has been where pupils' attainment across a range of tested curriculum outcomes has been correlated with the quantity or quality of technology which was available or which they experienced in their institutions (see, for example, Watson, 1993; Wenglinsky, 1998; Weaver, 2000; BECTA 2003). In the USA, only a small relationship between computer use in the school curriculum and improvement in pupils' test scores was found in a longitudinal study (Weaver, 2000). At this very general level, computer use makes very little difference to pupils' achievement. Modern Foreign Languages and Design Technology. An association between high ICT use and higher pupil attainment in primary schools was also reported in an earlier Teacher Training Agency study (Moseley et al. 1999, p 82) though the interpretation by the research team was that more effective teachers (and more effective schools) tended to use more innovative approaches, or chose to use the ICT resources that they had more appropriately, rather than that the technology itself was the cause of the differences in pupil performance. This connection between technology and learning is found fairly consistently however, and other studies have indicated a stronger association. The ICT Test Based evaluation identified a link between high levels of ICT use and improved school performance.

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 view 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 guarantee more participation from students as the current generation of students are well-versed with laptops, I-pads, and smartphones. 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.

II. OBJECTIVES OF THE STUDY

The objective of the research paper is to study

- To study the component of digital education in India.
- To utilize the benefits of Digital Education.
- To understand the Scope of Digital Education in India.
- To overcome the Challenges of Digital Education

Research Methodology

The study is primarily based upon the secondary data. The research for this paper was conducted through literature review, without any empirical work being conducted. The Secondary data is collected from related journals, articles, official websites, and government reports in order to analyze the context.

Digital Education in India

With the development of Internet, mobile phones, mobile apps, tablets, laptops, and other modern devices, things are becoming more and more digitalised in today's world. The education system in India's metros and other cities has also become modernised to a great extent, making way for digitalisation. With a number of International schools coming up, digital education is making its way into the education system of India and is taking the place of the traditional classroom training.

Basic Difference between Digital Education and the Class Room Education

Gone are those days when classroom training was restricted to textbook learning, teachers using the blackboard to explain things and students writing down notes in copies. The traditional teacher-centred methods of teaching and task-based approaches to learning focused more on making notes and memorization. However, it's no more chalk and talk in most schools. Classroom teaching has become more and more interactive nowadays with the use of digital methods such as PPTs, video presentations, e-learning methods, practical demos, online training and other digital methods or platforms.

Advantages of teacher-Led Classroom Training

- This is an efficient method of presenting a large volume of study material to students.
- It is a personal, face-to-face type of training.
- Everyone gets the same information at the same time.
- It is cost-effective.

Disadvantages of teacher-Led Classroom Training

- 1.Sometimes it is not interactive.
- 2.Success of the lectures depends on the effectiveness of the teacher.
- 3.More of memorising and mugging up for the students, instead of enhancing their mental skills and abilities.
- 4.Time taking.

How Does Digital Education Benefit the Students?

- Interactive: With digital education, classroom teachings have become more fun and interactive. Children tend to be more attentive. They are not only listening but also viewing it on the screen which makes their learning all the more effective. Here, sounds and visuals go hand-in-hand which is easy for the child to grasp.

- Attention to details: Interactive online presentations or practical sessions in educational content through interactive screen time help the students to pay more attention to details which enable them to complete their activities on their own.
- Quick completion: Using tabs, laptops or notepads, instead of pens and pencils, motivates children to complete their tasks quickly.
- Vocabulary: Active online screen time helps students develop language skills. By reading eBooks or accessing study materials online, they learn new words and expand their vocabulary.
- Learn at his pace: Many a times, a student hesitates to ask a question to his teacher in classroom training. But with digital education, even if he does not understand anything at one go, he can attend the recorded sessions to clear his doubts. Technology enables a student to learn at his own pace.
- User-friendly: The best thing about digital education is that it is user-friendly. You can very well access your curriculum wherever you are. You can learn on the go. Even if you miss certain classes, you can access the class notes and download files from the school website.
- Learn on his own: Also, nowadays, online study materials are easily available. Even if the entire education system is not digitalized, yet students can leverage the power of digital content depending upon their capabilities. So students, can access exclusive online study modules of various subjects, which help them to enhance their knowledge even without a teacher.
- External guidance: With online education, students can even further connect with distant counselors and faculty to seek guidance or resolve queries.
- No Physical Boundaries: Digital Learning has no locational and time restrictions. In case of face-to-face learning, the location limits the group of learners to those who have the ability to participate in the area. But this is not the case in digital learning. In digital leaning, there is no physical restriction and the learner can attend the sessions anytime, anywhere according to his/her comfort.
- More Engagement: Digital learning is a more engaging experience as compared to traditional learning. Through digital learning, a course can be designed in a way that makes it interactive and fun through the use of multimedia. Even, the more recently developed methods of gamification can be used to enhance the engagement factor.
- Cost effective: Digital learning is cost effective way of education as compared to traditional learning. This is directed towards both learners and teachers. In digital learning, here is a good chance that you don't have to pay exorbitant amounts of money to acquire textbooks for school or college. As textbooks often become obsolete after a certain period of time, e-learning is definitely a cost effective way of learning because of the reduced cost.
- Comfort Zone: Comfort zone can be established in digital learning as you can study at the time that suits you. In case of traditional learning where all the students have to present in the class when the teacher is teaching. The same is not the case which digital education. In digital education, the student can study at the time of his own comfort.

Disadvantages of Digital Education for Students

However, digital education also has its disadvantages:

- **Expensive:** First of all, it is expensive. That is why we see that most International schools and schools that have digital education are far more expensive than the regular schools.
- **Infrastructure:** To have digital education means, you need to have a proper infrastructure not only at schools but also at homes, particularly affordable broadband.
- **No fixed schedule:** Online learning requires much better management and rigid schedules, whereas in traditional classroom training, everything is as per a fixed schedule.
- **Reduces creative abilities:** Getting all answers on the net easily also reduces the children's own creative abilities.
- **Lazy approach to studies:** This may lead to poor study habits and can develop in children a lazy attitude. Digital education can also make children forget the basic way of studying. Even for simple problems and homework, they are used to seeking help from the net.
- **Security:** Last but not the least, going online does not mean that your child is only looking for study materials. There are many things which a child might come across that are not good for him.
- **So, digital education has its pros and cons. So, students need to be properly guided by their parents and teachers every time they are going to use the online technology.**

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 and robust.

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.

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 schools.

Scope of Digital Education in India

Globally India holds an important place in the field of education. There are more than 1.4 million schools all over the country having over 227 million students enrolled across different fields and more than 36,000 higher education institutes. India has become the second largest market for digital education after the US. However, there is still a lot of scope for further development in the field of digital education. There are some major investment and developments that have been taken place to promote the digital education in India. Some of them are:

- NIIT, which is pioneer in Training and skills development is planning to offer online courses from leading international universities to about 5 lakh people over the next three years with US-based edX.
- A digital education start-up, Byju's, has raised US\$ 50 million from the Chan Zuckerberg Initiative, founded by Facebook founder Mark Zuckerberg for the development of digital education in India.
- Intel Corporation, a US based multinational technology firm is planning to provide optimised learning solutions and extended computing technologies to students and schools across the country.
- In the field of information technology, the Cisco Systems plans to invest US\$ 100 million in India over the next 2 years for the development of digital education which will include opening of six new innovation labs, which will help to train around 250,000 students by 2020.
- Tata Trusts which is the part of the Tata Group and Khan Academy are starting webbased free learning portal to provide free digital education in India.
- Ignis Careers and SEED, Hyderabad-based education start-ups are working to provide low-cost school education with the help of digital technology.

Key Outcomes of Digital Learning

- E-Learning should be more focused on knowledge creation rather than merely on knowledge acquisition. As knowledge is the integral part of this century.
- Developing collective cultural practices, physical learning is important as learning takes place between people and their cultural surroundings.
- Along with emotional and cognitive development, Social and Emotional Learning (SEL) are also essential for the development of the students.
- Instead of computer-supported learning, it would be advisable to talk about new forms of Socio-Digital Participation (SDP). This includes media literacy, such as using social media and search engines.

Constant reforms in schools and teacher education is essential for development. The schools are not following the important developments of society. There is no evidence that learning styles or types would be informative in designing learning environments. Alternatively, it would be advisable to observe users' motivational profiles or study orientations. Meaningful and engaging learning methods are advisable, which support collaboration and self-regulation.

III. CONCLUSION

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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