Shikshan Sanshodhan : Journal of Arts, Humanities and Social Sciences ISSN(o): 2581-6241
Monthly, Peer-Reviewed, Refereed, Indexed Journal Impact Factor: 9.134
Volume - 9, Issue - 10, October - 2026

DOIs:10.2018/SS/202610019 --:-- Research Paper / Article / Review

Opportunities and Challenges of Digital Education: Study with Reference to Mumbai

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Abstract: *The 21st century is considered the era of technology, which has played a prominent role in all aspects of the social and economic sectors. The National Education Policy (NEP) emphasizes the importance of technology-enabled education. The expansion of digital tools in education has created opportunities for people to access quality education. Knowledge, skills, and values can now reach people in remote areas of the country through technological advancements.*

Digital education creates numerous opportunities for young people. The exchange of educational information and activities has expanded rapidly through email, social media, video conferencing, and online platforms. Learning can be made more accessible and convenient through mobile devices and the internet. Various educational programmes are available 24/7, allowing individuals to use a variety of technological tools according to their needs and convenience.

Although digital education offers numerous opportunities, it also presents several challenges. This research study attempts to explore the opportunities provided by digital education and the challenges associated with its implementation. The paper is based on both primary and secondary data. Primary data were collected from students and professionals in the Mumbai Suburban district. The study aims to understand the opinions of young people and professionals regarding digital education and to provide suggestions for making it more effective and accessible.

Key Words: *Digital Educations, Technology, opportunities, Challenges*

1. INTRODUCTION

India is moving rapidly in the field of technology. Technological penetration is necessary in the educational sector for the sustainable development and transformation of the country. The availability of the software, websites, social media and various applications, has reduced the global gaps. The COVID-19 pandemic brought about a significant transformation in the education sector. Since then, the use of technological tools in education has increased rapidly.

Technology is not only a need for education but become a essential part of the life for professional and students. India rapidly moves to achieve the goal of Viksit Bharat. In this journey we cannot ignore technology. Education is a key sector where an entrepreneur trains with the knowledge and skills as per requirements of the country's development. Digital education enhances skills, provides flexibility in learning, improves employability, offers cost-effective learning opportunities, and enables young people to explore global opportunities. This will help the country to achieve the goal of Viksit Bharat. If we look at the aspect of digital education, it creates some challenges like, reducing social interaction, internet connection, lack in concentration, diversity of the language etc. This paper discussed opportunities and challenges of digital education.

2. REVIEW OF THE LITERATURE

- Ghute, Bhagwan & Patil, Dhanaji & Markad, Sandip. (2023). studied on" Digital Education Challenges and Opportunities in India". According to them, digital education provides a huge amount of opportunities for educators and learners. Technology keeps the teachers and the learner through various means of media. Since the opportunity of educational media is available 24/7 a day, the learner can take advantage of it as per their convenience. However, there are many challenges in the future against technical educational media such as efficient infrastructure, availability of internet, lack of knowledge about the use of technology, etc. The findings of this study show that digital education is helping the education system in the classroom at present and in the future, but research and innovation and work are essential to more effective use in the future.

- Geeta Rani , Puninder Kaur & Taruna Sharma (2022). Conducted study on "Digital Education Challenges and Opportunities". This study analyses the challenges and benefits of the online education system in the context of students, teachers and educational institutions. According to the study, the online education system depends on the medium of computer, mobile, tablet, TV, etc. The Government of India has developed various online platforms like SWAYAM, NPTEL, E- Pathshala, Diksha etc. This initiative helps to expansion of internet users and smartphone users in the country. The findings of this study show that the expansion of digital education boosts innovations in media platforms which make the educational process more easy, accessible and convenient.

- Lalitha R. (2022). Carried out research on "Challenges and Opportunities in Digital Learning". This study show that, technological knowledge has become necessary for students in today's era. The successful implementation of online learning requires the appropriate selection of digital platforms and a supportive learning environment. However, the shortcomings of the learning method can be overcome by means of assistive devices and the student can be encouraged. Due to the development of the learning process, the future education system has undergone a radical change. However, there is a need to change the online education system as per the demands of the industry. Online technology and skill development enhance employment opportunities for the youth. Findings of the study show that the curriculum of online education systems should be made as per the requirements of the industries.

- Netramani Budhia and Sasmita Behera (2023), studied "Challenges and Opportunities of Digital Education in India". This study throw a light on the importance of digital education, various media of digital education, new education system and online education system. The findings of this study show that the expansion of digital education system should be carried out with the cooperation of industry organizations and the government. As technology has become indispensable in the education sector, students must be equipped with adequate knowledge of various digital tools to improve their learning efficiency. Covid 19 provides an opportunity for the development of ICT. It is necessary to increase its practical use. This study describes the opportunities and challenges against the spread of education.

3. OBJECTIVES OF THE STUDY

- To Analyze Opportunities of digital education
- To know the Challenges of digital education
- To give suggestions for effective use of the digital tools

4. METHODOLOGY

Primary and secondary data have been used in this research study. Primary data obtained from students and professionals. 60 samples for this study were carried out from Bandra to Borivali area of Mumbai. Primary data has collected through Google form and analysed through percentage method while various articles, magazines etc. have been used for secondary data.

5. IMPORTANCE OF THE STUDY

Digital education enhances the skills and learning capacity of every person without any economic and regional barriers. Technological education has become an important part of the learning and teaching system. This study tries to get the opinion of the learners about opportunities and challenges of digital education. The opinions and suggestions of respondents help to improve the effectiveness of online education the challenges can be overcome and its implementation Gaining knowledge in the future betterment. Furthermore, the study explores opportunities to strengthen the benefits of digital learning and provides valuable information for students and professionals.

6. RESULT AND DISCUSSION

This study analyses the opportunities and challenges of technical education. An attempt has been made to know the opinions of about 60 respondents from Weston Mumbai. The analysis of this research study has been divided into six sections, which include primary information of the respondents, knowledge of digital technology, opportunities for expansion of digital technology, challenges against the use of digital technology, effectiveness of technology and necessary suggestions for it, etc.

A. General information

In the primary information of this research study, information about the age of the respondents themselves and their occupation is obtained.

- Age

Table: 1

Age	No. of respondent
Below 20	44
21 to 40	16

The table show that, 73.33% of the respondents were below the age of 20, while 26.67% belonged to the 21–40 age group. No respondents were above the age of 40.

- Gender

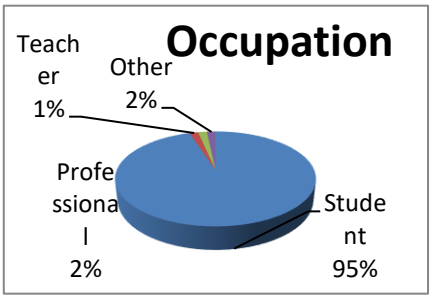
Table: 2

Gender	No. of respondent
Male	5(8.3%)
Female	55(91.7%)

The table shows that the number of female respondents was 55(91.7%) while that of male respondents was found to be 5(8.3%).

- Occupation

Chart: 1



The diagram shows occupation of the respondents. According to the information gathered from respondent 57 (95%) were students. while 1 (1.7%) was professional. The proportion of respondents associated with the teaching professional was found to be 1 (1.7%) In addition, the proportion of other occupations was 1 (1.7%).

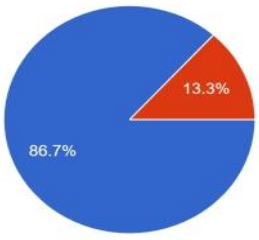
Source: Primary Data

B. Information about education

In this section, the knowledge of the respondents has been examined.

- Use of Devices

Chart: 2



The diagram highlights whether the respondents use technological devices or not. According to the information received, 52(86.7%) of the respondents were found to use various types of technological devices, while 8(13.3%) percent of the respondents did not know how to use any such type of technical devices.

Source: Primary Data

- Type of Device

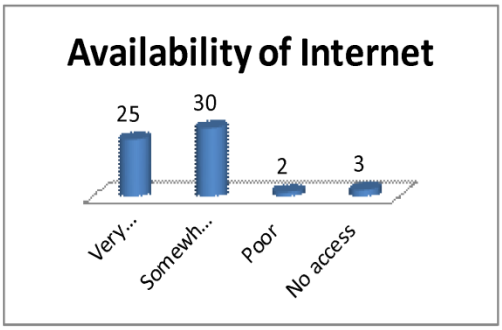
Table: 3

Type of Device	No. of respondent
Smartphone	53(88.3%)
Laptop	5(8.3%)
Tablet	1 (1.7%)
Desktop	1 (1.7%)

The above data reflects respondents' overall perception of the use of digital devices. Nowadays, technological devices are an integral part of life. It has become an important part of the study. An attempt has been made to find out which devices are used more by respondents. The data reveals that 53(88.3%) percent of the respondents used smartphones, while the number of respondents using laptops was found at 5(8.3%). The number of respondents using tablets was 1 (1.7%), while the number of respondents using desktops was 1 (1.7%). Various technical devices are available for online education and conducting professional work. Individuals are uses technology as per their convenience.

- Availability of Internet

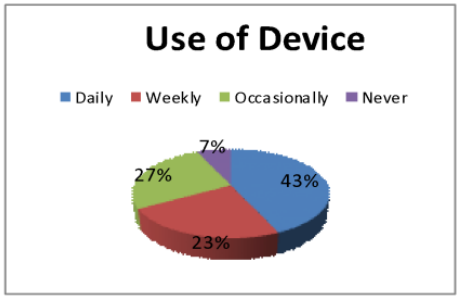
Chart: 3



The Internet is a primary requirement in digital education. The above diagram shows the opinion of the respondents about the availability of the internet. The results indicate that 25(41.7%) of the respondents said that the internet quality is very good, while 30(50%) of the respondents said that the internet facility is available to some extent. The number of respondents who said that the internet is very poor was 2(3.3%). However, since Mumbai is a megacity, there is no possibility of there being no internet, but 3 (5%) of the respondents said that they are not using internet facilities.

- How many times a day do you use a digital device?

Chart: 4



The Diagram clearly shows that 26(43.3%) of respondents were found to use digital devices daily, while 14(23.3%) of respondents used it once a week, 16(26.7%) of respondents used digital devices occasionally, while 4 (6.7%) of respondents never used this technology.

Source: Primary Data

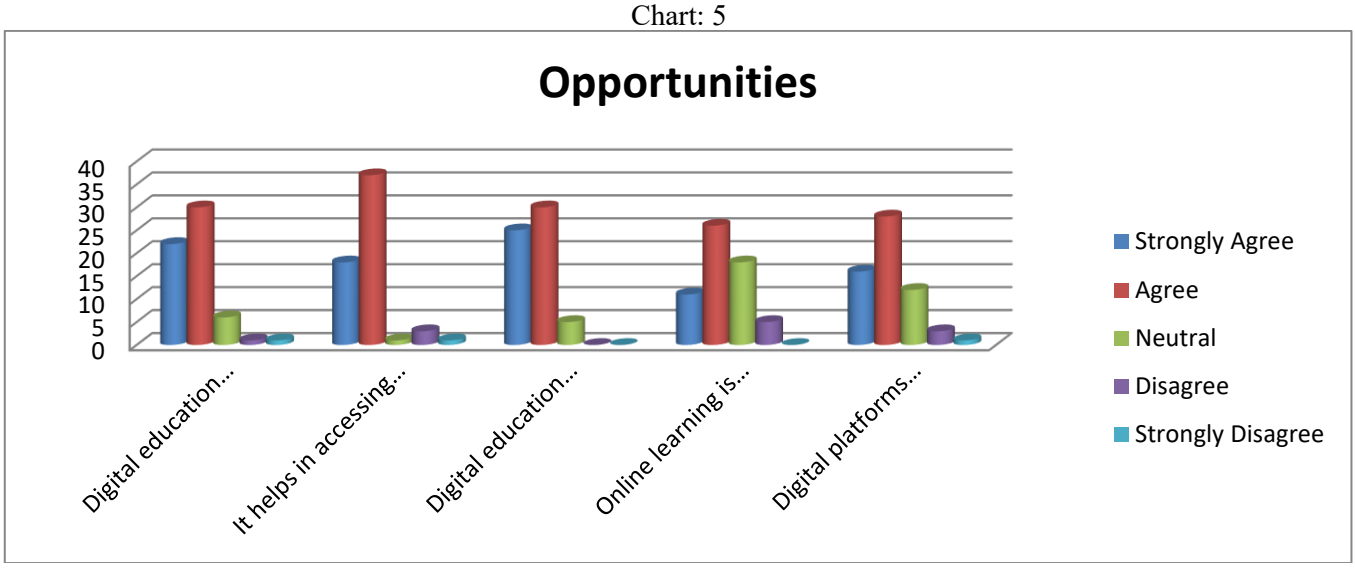
C. Opportunities of digital education

Expansion of digital education provides learning facilities to the people in rural India, where women are not allowed to go out for education, so they can get education and enhance their skills through use of the digital devices.

Table: 4

Opportunities of digital education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Digital education provides flexible learning opportunities	22	30	6	1	1
It helps in accessing quality education from anywhere	18	37	1	3	1
Digital education improves your technical/digital skills	25	30	5	0	0
Online learning is cost-effective compared to traditional learning	11	26	18	5	0
Digital platforms provide personalized learning experiences.	16	28	12	3	1

Chart: 5



Source: Primary Data

The data indicate that respondents have mixed and varied opinions regarding the opportunities offered by digital education. A majority of the respondents either strongly agree or agree that digital education provides flexible learning opportunities, enables access to quality education from anywhere, improves technical and digital skills, is cost-effective compared to traditional learning methods, and offers personalised learning experiences. However, some respondents may not be using digital devices regularly and may not be fully aware of the opportunities available through digital education.

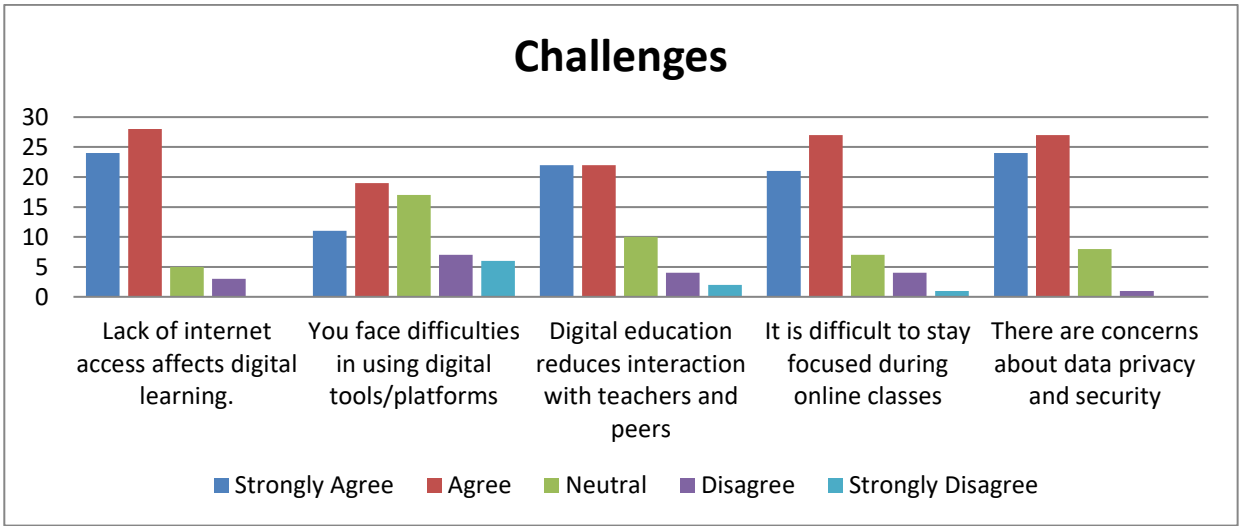
D. Challenges of digital education

Digital education creates immense opportunities for the learner but on the other side of the coin, some challenges are there of this system.

Table: 4

Challenges of digital education	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Lack of internet access affects digital learning.	24	28	5	3	0
You face difficulties in using digital tools/platforms	11	19	17	7	6
Digital education reduces interaction with teachers and peers	22	22	10	4	2
It is difficult to stay focused during online classes	21	27	7	4	1
There are concerns about data privacy and security	24	27	8	1	0

Chart: 6



Source: Primary Data

The above table and chart indicate that respondents have varied opinions regarding the challenges associated with digital education. Most respondents either agree or strongly agree that the success of digital education depends on internet accessibility and connectivity, with reliable, high-quality internet access being one of the major challenges. Various digital devices are available for online teaching and learning, and individuals use them according to their needs and requirements.

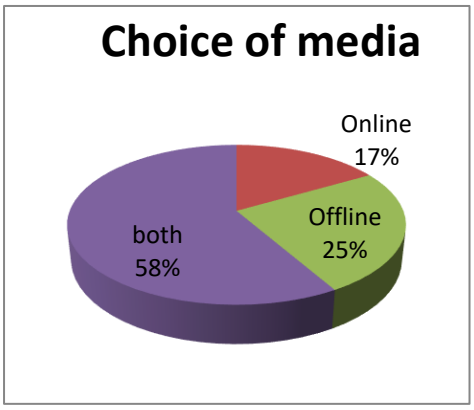
Most respondents also agree that using multiple digital platforms can be challenging. Traditional teaching methods involve face-to-face interaction between teachers and students, whereas digital learning often lacks direct personal interaction, which may affect the quality of the learning process. Furthermore, most respondents either agree or strongly agree that it is difficult to remain focused during online classes.

E. Effectiveness and choice

The effectiveness and choice of the digital education system can be discussed in this section.

- Choice of media

Chart: 7



Since the online education system is not very effective, parents and students do not prefer it. Lack of concentration in this education system is the biggest challenge. We cannot create a learning environment at home. But nowadays digital devices have become a part of the education system. Covid-19 has changed in the learning process. Although various options have become available to the learner, according to the information received from respondents 10(16.7%) prefer the online education system, on the other hand, the number of respondents who preferred the traditional learning system was found to be 15(25%), and the proportion of respondents who prefer both was 35(58.3%).

- Effectiveness of educational media

Table: 5

Effectiveness	No. of respondent
Yes	17(28.3%)
No	15(25%)
Not Sure	28(46.7%)

The table shown denotes responses on effectiveness of educational media. If we look at the difference between the choice of media and the effectiveness of the media. The choice of any media is made keeping in mind the convenience. It does not necessarily lead to effective results. The same is true of the online education system. This system creates more convenience than the traditional system, but questions have often been raised about its effectiveness. Data show that 15(25%) of the respondents believe that the effectiveness of educational media does not seem to be special. According to the opinion of 17(28.3%) of the respondents, online education Media is very effective to a large extent while 28(46.7%) of respondents are neutral in answering this question

- Whether digital education has improved the results or not?

Table: 6

Learning outcomes Improved or not?	No. of respondent
Yes	26(43.3%)
No	5(8.3%)
May be	29(48.3%)

It is necessary that the technical education system really leads to the results of learning. In this study, the number of respondents who believe that the results have improved due to the digital education system was 26(43.3%), while the proportion of respondents who believe that certain results cannot be achieved due to this education system was 5(8.3%). Also 29(48.3%) responded that they were not sure about it.

7. FINDING

- More than 50% respondents was below 20 and students
- 91.7% respondents was female
- 86.7% respondents are using digital tools for teaching –learning
- 88.3% Respondents were using smartphones for learning purposes.
- Respondents are rarely facing internet problems.
- 26(43.3%) were daily users and 14(23.3%) were weekly users of the devices.
- Respondents faced problems like internet access, interaction with teachers and peers, lack of concentration, data privacy and security etc.
- The study analyse the opportunities like flexibility, accessing quality education from anywhere, cost-effective, personalized learning experiences etc.
- More than 50% of respondents prefer online and offline both learning processes.
- 26(43.3%) respondent believe that digital education has improved their learning outcomes

8. SUGGESTIONS

- Internet connectivity to the schools and Upgrade digital infrastructure time to time
- To ensure safe, sustainable, and equitable connectivity in the school, the government must implement the policies, regulations, technologies. Also provide finance for the same.
- Select digital tools in education as per the objectives. It can be student friendly
- Organize a workshop on digital tools. regularly and upgrade knowledge as per requirements
- Engage students as per their requirements
- Use digital learning platforms with high quality content which can transform learning for youth and professionals.
- Focus on women and girls for empowering purposes with special digital skills.
- Capacity building of all teachers and students
- Extension of internet services to households and individuals in order to provide digital education and lifelong learning.
- To simplify workflows emphasize the benefits of digital tools which save time and enhance teaching.
- Regular breaks and manageable learning phases can help ease digital fatigue and reduce feelings of being overwhelmed.
- Schools should increase manageable and user-friendly platforms which focus on usability and ease of integration.
- Provide more graphic based and practical content then just theoretical
- Improve digital learning by making it more interactive, accessible, personalized, and supported with better teacher training and reliable technology.

9. LIMITATIONS OF THE STUDY

The findings of this study are based on the answers to the questions received from the respondents. This information has been obtained from students and professionals of Mumbai suburban. The opinions of other people in other areas may differ.

10. CONCLUSION

The 21st century is often referred the era of technology characterised by the rapid expansion of technological devices and digital tools. The world has become more interconnected and the knowledge has crossed the borders of the country. After Covid 19, there has been a special change the transformation of technology which helps to enhance the skills of the people in remote areas. On the other hand, the internet problem remains a challenge. Online learning also presents challenges related to the quality of education and students' concentration. Nevertheless, the growing availability of technological devices and the emergence of various digital learning platforms offer opportunities to improve the quality of education over time. In short, the expansion of technological education opens up new directions for the learner. The increase in knowledge and skills helps in the process of economic development.

The use of digital devices can helps to expand the Indian Knowledge System in remote areas. thereby supporting to achievement of the goal of sustainable development and Viksit Bharat. According to the findings of this study, the young generation gives special importance to the technological system over the traditional education system and wants to move forward in it by removing its shortcomings. A very important aspect of this education system is that any kind of

knowledge can be acquired at any place and at any time. In addition, the maintenance and expansion of this knowledge is less expensive and time-saving.

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