



## Promoting Digital Literacy in India—Challenges and Their Solutions

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### Abstract:

Digital Transformation has called for a mass movement to promote digital literacy in the country. For this all stakeholders including technological and educational institutions play a crucial role in achieving desired results. Information is the main commodity in the present day knowledge society and whoever has quick access to information of course has the greatest advantage. Technology provides as an opportunity to transform teaching and learning process and therefore it presses the need to constantly update and develop education models that suits the new era's demands in view of the fast changing Technology. Covid-19 Pandemic also has changed the sort of educational Landscape and virtual reality has become the new reality in today's times wherein it has brought many changes and challenges. During Pandemic students and all stake holders became more and more positive about the online education; many top most institutions have launched their own platform to deliver academic aspects. Government has taken many initiatives to promote digital education in India. But, still there are many challenges to with regard to this. This paper tries to highlight all these aspects in many ways.

**Key Words:** Digital Transformation, Virtual reality, Digital education.

### Introduction:

Digital Transformation has called for a mass movement to promote digital literacy in the country. For this all stakeholders including technological and educational institutions play a crucial role in achieving desired results. Information is the main commodity in the present day knowledge society and whoever has quick access to information of course has the greatest advantage. Technology provides as an opportunity to transform teaching and learning process and therefore it presses the need to constantly update and develop education models that suits the new era's demands in view of the fast changing Technology.

Online courses can help and bridge the gap in affordability. It enable students even the remotest parts of the country to have access to quality education at an affordable cost. This virtual classroom will be available to everyone who has internet connection and hence enable everyone to access it. Secondly online classes will help a lot to those who are not able to attend classes in person such as working professionals and house wives. Online classes are very helpful to them for enhancing their skill sets and increasing their employability. Covid-19 Pandemic also has changed the sort of educational Landscape and virtual reality has become the new reality in today's times wherein it has brought many changes and challenges.

Before Covid pandemic teachers were not trained to deliver academic aspects through online by using various available platforms like Google meet, Zoom etc. Most of them had never delivered anything online and the students might not have proper internet connectivity, many of them might have left their laptops there when they went home. But the spread of corona virus necessitated the new mode of education called hybrid mode of education. It is a mixture of both online and offline classes. In online classes series of lectures are delivered, there may be less interactions between teachers and students, due to higher cost of internet connectivity. Here academically weaker students can access the video at any number of times for easy understanding and remembering. In offline classes students come to classes for discussion and interaction. Here In person education takes place; most of the students who do not have internet connectivity are attending physical classes.

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But, still there are many challenges to with regard to this. This paper tries to highlight all these aspects in many ways.

### Objectives of the Study:

1. To understand the importance of digital education
2. To find the challenges of digital education
3. To know the government initiatives to promote digital education
4. To offer suggestions based on study

### Review of Literature:

Midha (2016) recognized digital India as a great plan to develop India as a knowledge hub but he also expressed his doubt regarding implementation due to lack of infrastructure and support of stakeholders. He admitted that if digital India programme implemented properly, there will many reforms in the lives of every citizen and society.

According to Seema Dua, the mission of digital India is facing many challenges in its implementation. She admitted that digital india campaign can be successful only when it gets support and co-operation from government and other stakeholders.

From the above it is clear that digital literacy can be easily promoted only when government takes various measures to build digital infrastructure and other facilities.

#### Methodology:

This study collects the information from secondary data. Secondary data are collected from books, journals, articles and websites.

#### Challenges of Digital Education:

1. **Lack of Good Internet Speed:** In most of the places of India, the speed of internet is very poor. Therefore it is difficult for students to attend online classes and access online videos.
2. **Lack of Quality teachers:** Teachers are not given proper training to conduct classes by using various digital platforms even some of them are not aware of these and in some of the teachers are not even interested in online education; they prefer traditional chalk and talk method of teaching.
3. **Digital Divide:** It means lack of equal access of education to all strata of the society due to various constraints like non availability of low cost tablets and PC's, so weaker sections of the society will be deprived of online or digital education.
4. **Insufficient Funds:** Application and adoption of digital technology requires huge amount of funds and infrastructure, so it is very difficult for developing countries like India to develop software's and hardware's required to upgrade the digital technology
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9. **Lack of Proper Policy on the part of Government:** Recently government announced the implementation of NEP 2020, but Government has not focused more on online education. Digital education is all about tools, technology, platforms and many more. Unfortunately, we don't have a proper policy in respect of these aspects

#### Initiatives taken by the Government to Promote Digital Education:

Following are the Initiatives taken by the Government to Promote Digital Education in India.

1. **Swayam (Study Webs of Active Learning for Young Aspiring Minds):** It was launched by the MHRD, Government of India under Digital India Programme to bring various professional and online courses from ninth standard to post graduation. It enables professors and faculty of centrally funded institutes like IITs, IIMs, IISERs, etc to teach students.
2. **Deeksha:** It is a national platform for school education, an initiative of NCERT, Ministry of Education. This platform is developed for school education, foundational learning programs, and to support inclusive learning for underserved and differently abled communities of learners and teachers.
3. **National Digital Library (NDL):** This is also a very ambitious digital initiatives in higher education. Presently more than 80 lakh e-books are available through this portal to each and every one at free of cost. This service can be accessed through the android app also. Presently more than 20 lakh students are registered in this particular platform.
4. **E-PG Pathshala:** It is a portal under which high quality, curriculum based, interactive content in different subjects and languages are being developed. MHRD under its national mission on education through ICT has assigned work to the UGC for the development of e-content in 68 subjects at post graduate level. The contents and its quality is the key component of education system.
5. **Swayam Prabha:** It includes 32 Educational DTH Channels which provide study material for different streams students such as Arts, Science and Commerce etc. Such types of study materials are useful for both regular students and for the lifelong learners also.
6. **Pradhan Mantri E-Vidya Scheme:** It is an initiative by the Ministry of Education that will help in facilitating access to digital/online learning as well as teaching materials of various types among students and teachers.
7. **National Academic Depository (NAD):** Through this particular initiative every citizen can access to digital certificates and awards issued by academic institutions. A number of academicians are associated with this depository as it provides free storage, access and recognition to them.
8. **E-Shodh Sindhu:** This platform provides more than 15000 journals of national and international levels to the higher education institutions. This facility is run through INFLIBNET program. We can learn a lot through this specific program also.
9. **E-Yantra:** This particular initiative is very specific to the incorporation of robotics into engineering education and it is based on computer science, mathematics and engineering concepts. All the content is available to everyone free of cost.
10. **E-Kalpa:** More than 160 online courses related to art and design learning are covered through E-Kalpa, another digital initiative of higher education.
11. **The Free and Open Source Software for Education (FOSSEE):** This initiative is for the promotion of open source software in educational institutions. Different sort of seminars, conferences, documentations and other programs are conducted for the purpose.
12. **E-Vidwan:** Another digital initiative in higher education is E-Vidwan which is run under The 'Information and Library Network' (INFLIBNET) and there is huge data of academicians and research scientists who belong to research organizations.

13. **Virtual Labs:** This initiative encourages the remote access to the labs of science and engineering. The students can learn a lot through remote experimentation. From this particular platform the students can learn about different tools and equipment's also.

**Suggestions or solutions:**

Important measures to be taken by the government to remove challenges for developing digital education in India based on the study can be summarized as follows:

1. Government should ensure quality education at hybrid mode of education. Therefore, teachers must be provided proper training through modern digital platforms at regular intervals.
2. Government should take proper steps to reach online education each and every part of the country by providing internet connectivity to every nook and corner of the nation.
3. Government should allocate sufficient funds for development of digital infrastructure
4. Government should encourage research and development activities to seek innovative educational models.
5. Government should make proper policy relating to implementation of hybrid mode of education compulsorily at all levels of education, so that digital education can be made more popular.
6. Government can tie up with corporate companies to build digital infrastructure through corporate social responsibility activities.
7. Government can make collaborations with foreign institutions to generate and adopt modern new innovative teaching methods, skills and platforms.

**Conclusion:**

Education plays an important role in the overall development of individuals and the nation. Education must be a holistic process comprising of lab working, working with computers, interacting in groups and continuous learning. Emotional connect and proper guidance are possible only in in person or offline classes. Therefore government must encourage both offline and online classes and educate the society about the positivity of hybrid mode of education. Digital education must complement the in person education. Finally at the most quality of the education should not be deteriorated, that should be taken care of.

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