



DIGITAL EDUCATION IN INDIA – AN OVERVIEW

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ABSTRACT

The Coronavirus pandemic has shaken the entire nation and the education sector is one of the worst hit during this impending crisis. Colleges and universities have been shut for almost seven months now to curb the spread of the virus. This is a major setback for students and teachers who can no longer access learning resources through the traditional model of education. To overcome this crisis, the Government of India has taken several ICT (Information Communication Technology) initiatives through the Ministry of Education and UGC (University Grant Commission) to launch free electronic learning or e-learning platforms for students. e-Learning is expanding its horizon and provides a unique opportunity to collaborate, share knowledge and learn under a common platform. These online platforms are available for students, researchers, learners, and teachers where they can interact with each other in a classroom setting. These courses are available for both undergraduate and postgraduate students and contain live online lectures, course contents, quizzes, online tests, and multimedia presentations to make them more interesting for students.

INTRODUCTION

Digital Education in India is the way forward to learning and gaining knowledge through the means of technology and digital devices. COVID-19 pandemic had briefly disrupted the school education system in India. Since the 1st lockdown in March 2020, all the states have responded to the COVID-19 situation with speed and innovation. The existing digital resources were leveraged to maintain continuity in students' education.

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What is Digital Education in India?

Digital Education is a technique or method of learning which involves technology and digital devices. This is a new and broad technical sphere that shall help any student attain knowledge and gain information from any corner across the country. It is believed that Digital Education in India is the future of education and learning.

Various channels have been defined by the Government of India for a widespread of sources and means to provide education to different corners of the country. Discussed further in this article are the channels and initiatives taken up by the Government for Digital Education in India.

Digital Initiatives of Ministry of Human Resource Development on Education (MHRD)

1. PM e-Vidya

A comprehensive initiative was announced on May 17, 2020, which aims to unify all efforts associated with digital education to enable equitable multi-mode access to education. It is envisaged that it will benefit nearly 25 crore school-going children across the country.

2. DIKSHA (Digital Infrastructure for Knowledge Sharing): e-Learning

DIKSHA, an initiative taken by the Ministry of Education was launched in September 2017 to facilitate advanced digital learning for teachers from classes 1 to 12. The digital portal has been mainly designed for teacher education but is also available for students who want to connect to the teacher's community. DIKSHA offers training courses, worksheets, lesson videos, curriculum, and assessment tests for teachers.

DIKSHA Contains courses for Teachers, quizzes, and others. Lots of e-content will be provided which are aligned with the curriculum. A large number of case studies and solutions will be provided with the help of Energised Textbooks (ETB's)

One of the unique features of this platform is the QR code which can be scanned to gain access to a plethora of learning materials and e-Books. More than 80,000 e-Books are available for class 12th students in multiple languages. Android and iOS users can download the application from the Google Play Store and iOS app store. Web users can visit and register at the official website at disha.gov.in

3. Vidya Daan



It was launched in April 2020. It is a content contribution program at the national level, that makes use of the DIKSHA platform and tools, it allows donation or contribution of e-learning resources for school education by experts, private bodies, and educational bodies.

4. Swayam Prabha – TV Channels

Swayam Prabha was conceptualized by the Ministry of Education that consists of a set of 32 DTH channels that may telecast educational contents 24x7 for college students across India. Each day, the channel will telecast a replacement content of 4-hours duration. The content are going to be shown 5 times a day in order that students can select the time and watch the programs at their convenience. Contents are available for sophistication 12th, UG, and PG students. Detailed courses are offered through SWAYAM on multiple disciplines as well as MOOCs courses. Students can visit www.swayamprabha.gov.in for details regarding the free installation of a set-top box and other information.

5. e-PG Pathshala

It is an online portal for post-graduate courses started by the Ministry of Education under NME-ICT (National Mission on Education through ICT) and the UGC. Under this initiative, over 700 e-books in over 68 postgraduate courses will be available free for students. The online portal is loaded with high-quality text content, illustrations, videos, tutorials, documents, PDFs, etc.

e-Pathshala mobile app (Android, iOS, Windows), and web portal can be used to access e-textbooks. It can be accessed by students, teachers, and parents. 3,500 pieces of audio and video content of NCERT are available. It is available in different languages – English, Sanskrit, Urdu, Hindi.

There are three quadrants under the e-PG Pathshala module namely:

- e-Adhyayan consists of e-books and video content.
- MOOC (Massive Open Online Courses) courses offered under the SWAYAM portal.
- e-Pathya offers offline and distance-learning courses for post-graduate students.

6. DAISY for the differently-abled Children

For hearing impaired students, one DTH channel is available with sign languages. The study material has been developed in Digitally Accessible Information System (DAISY), for the hearing and visually impaired.

7. Radio Broadcasting



The radio broadcasts focus on activity-based learning. For broadcasting content related to the National Institute of Open Learning – NIOS (grades 9 to 12), 289 community radio stations have been used. This mode of education is particularly useful for students who are living in remote areas, particularly for grades 1 to 5. Shiksha Vani is a Podcast of the Central Board for Secondary Education (CBSE) Shiksha Vani is used by learners of grades 9 to 12. There are quite 430 pieces of audio content for all subjects from grade 1 to 12, in Shiksha Vani.

8. SWAYAM (Study Webs of Active Learning for Young Aspiring Minds)

SWAYAM was launched on 9th July 2017 by the Ministry of Education. It is an initiative under the “Digital India” campaign undertaken by the Government of India in 2015. The platform has been designed to impart quality education to school students, undergraduate, as well as post-graduate students in India. The portal offers free printable and downloadable study materials, video lectures, discussion forums, and online tests from over 1600 courses. After successful completion of the course, students can get a certificate.

Students can access the web version at <https://swayam.gov.in> or download the mobile application from Google Play Store or AppStore. Registration at Swayam is quite simple. The learners can simply register through a valid email ID or Facebook or Google plus account.

9. National Digital Library of India (NDLI)

The National Digital Library (NDLI) developed under NME-ICT by the Ministry of Education through NME-ICT is a virtual repository consisting of academic contents in multiple disciplines from school to post-graduation level. It is an all-purpose platform designed for college kids of all ages, teachers, learners, researchers, librarians, professionals, and other users.

The online platform is out there 24x7 in additional than 70 Indian languages. A wide variety of learning resources are available including e-Books, videos, thesis, manuscripts, documents, and many more. For the web version, users can visit <https://ndl.iitkgp.ac.in> and also download the android application from Google Play Store.

10. E-ShodhaSindhu

e-ShodhSindhu jointly planned by the Ministry of Education and therefore the Government of India may be a digital library providing access to e-resources like journals, eBooks, factual, bibliographies, citations, etc. for higher education.

All academic institutions like central and state universities and colleges can avail of the services. For registration, simply log on to <https://ess.inflibnet.ac.in/oes> or the learners can also email at eshodhsindhu@inflibnet.ac.in

11. National Programme on Technology Enhanced Learning (NPTEL)

NPTEL is another project funded by the Government of India and the Ministry of Education. It was a collective initiative taken by the Institute of Science, Bangalore, and 7 other IIT institutes (Delhi, Bombay, Kanpur, Kharagpur, Guwahati, Roorkee, Madras).

The online repository offers various courses in engineering, science, social sciences, and humanities. There are no course fees, however, certification exams will cost an INR 1000 per candidate. For further details, you can visit the online web portal at <http://nptel.ac.in>

12. Virtual Labs

Virtual Lab is a digital consortium founded by the Government of India in association with the Ministry of Education under the NME-ICT initiation. The main idea is to provide remote access to virtual laboratories for students from science and engineering streams from both undergraduate and postgraduate levels.

This consortium is conducted by IIT Delhi and has around 12 participating institutes. The project consists of more than 700 web experiments and lab facilities under the supervision of experienced faculty.

e-Learning is expanding its horizon and provides a unique opportunity for students, teachers, researchers, and knowledge aspirants to collaborate and share their knowledge and learning resources under a common platform.

Digital Education in India – Way Forward

- It is intended to develop quality e-content in local languages, to address the diversity of Indian languages.
- Addition of skill development courses, virtual labs, virtual vocational training was another main focus of this programme.
- To address the digital divide framing of Online/Digital Education Guidelines.
- Integrating education systems and technology by Developing digital classrooms.
- For assessments in the era of digital education framework has been Developed.
- Making sure of coherent user experience by multi-mode access to education through Mobile apps, web portals, TV channels, radio, podcasts.

- Focus will be given on increasing usage of mobile phones to enable “anytime, anywhere” access and increase penetration.
- Priority for providing complete access to any time, anywhere e-content and e-infrastructure is for all learners in schools;
- e-content is being developed with slightly varied priorities –covering 6.3 crore children of grades 9 to 12 will be the topmost priority.
- Priority will be from grades 6 to 8 covering students’ strength of 6.4 crore children.
- Priority will be on numeracy and foundational literacy for grades 1 to 5.
- Teachers will be up-skilled to leverage e-learning resources.

Advantages of Digital Education in India

India and the entire world were fighting the COVID-19 pandemic during 2019-20, digital Education in India was the sole source of learning for the students in the country. Benefits of Digital Education in India are discussed below;

- ❖ This initiative has made students gain practical and technical knowledge in addition to bookish information.
- ❖ With digital learning, a student can engage in online classes or learning anywhere, at any time. No limitation as to the place of learning.
- ❖ Students can take their time to understand any topic with study material available online.
- ❖ Learning can be made more engaging and interactive between the students and teachers through the mode of digital education.

It is also important that physical education can’t be replaced by any digital education. It just acts as a supplement and does not completely overpower.

Challenges with Digital Education in India

digital education can be reached out to students across the country, a lot of technology-based adaptations have been encountered by the Government. Few major challenges with Digital Education in India are given below;

For easy access to information, the availability of internet connection to all is one of the biggest requirements for digital education. This will have to be achieved by the Government.

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- ❖ People belonging to socio-economically weaker sections in society need devices and technology so that they are not deprived of education.
- ❖ It is essential to train the teachers to conduct the digital classes. If the teachers are technically sound, they can conduct the digital classes effectively.
- ❖ The government should ensure schools and colleges are provided with proper facilities for digital classrooms to make digital cost-effective.

Conclusion:

The government of India has taken several ICT initiatives through the Ministry of Education and UGC to overcome this Covid -19 pandemic crisis. Launching free electronic learning or e-learning platforms for students is the need of the hour. e-Learning is expanding its horizon and provides a unique opportunity to collaborate, share knowledge and learn under a common platform.

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