

Online Education - Opportunities and Challenges Post Covid-19 in India



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Covid-19 pandemic has disturbed the traditional education system as most of the educational institutions have been disturbed. First time in the history of the world such massive disruption has taken place in all spheres of life. Educational institutions are badly hit as there is no other option but to close them down for the particular time period the pandemic lasts. Now a transformation is taking place in the educational institutions in the form of replacement of the traditional education system with various modes of the online education system in India. This article discusses the current scenario, opportunities and challenges in the online education system in India.

Keywords: Covid-19, pandemic, online education, opportunities, challenges, India

Introduction

Covid-19 pandemic has spread in the whole world. It is spreading like a forest fire. It is a highly infectious disease. Till today there is no specific medicine for this disease. The scientific community of the whole world is working on its medicine and vaccine. Today, it is very difficult to predict exactly when an effective vaccine and medicine will come into being to fight with this deadly virus. For the time being, the transmission of Covid-19 must be prevented for the life and health of the people, which is only possible when the major precautions like social distancing; use of face masks; continuous sanitisation of self and surroundings etc. are taken into consideration.

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In today's context, it is also the need of the hour to maintain the social distancing in the traditional education system, which is very challenging and almost an impossible task. Educational institutes have been practising the traditional teaching method since ages. The traditional method has got advantages like face-to-face interaction and developing interpersonal skills and group learning, which are very much needed for the overall development of a student. Being regular in classes helps them interact with other individuals of their age, better disciplined, follow a regular schedule, and improving alertness and physical fitness. Classroom teaching is having more interaction between teachers and taught. By going to school, an individual personality is shaped. Students learn a lot by participating in-class field trips, school activities, sports, clubs, and more. Sport can teach the sportsman spirit. People in India still believe that traditional education is highly flawed, and there are better ways to educate and prepare people to live in today's world.

Paolo Freire, a Brazilian philosopher of education, expressed his fear of public schools utilising the banking method of education, where students are required only to store the information that their teachers give them, only to squeeze it all out when a quiz comes, without original output and often with failure. In the process, the students become bankrupt because they do not have anything valuable stored within them to give out anymore.

Remote education is indeed much more effective at the micro-level, since it allows the students to receive similar educational services with greater convenience, a wider choice of higher educational institutions and at a lower cost compared to traditional education. At the same time, no negative influence of remote education on the macro-level economic system has been revealed; on the contrary, a positive, albeit slight, influence similar to traditional education has been found. (Sibirskaya et al., 2019)

Hence the promotion of the formation and development of remote education is recommended instead of limitation since it allows modernising the educational system for the benefit of both supply and demand. On the demand side, the benefits are associated with the improvement of global competition among higher educational institutions, and, accordingly, with the improvement of services and reduction in prices. On the supply side, the benefit consists of the possibility of diversifying the educational services of a higher educational institution and its marketing development, including the entrance to the world markets. (Sibirskaya et al., 2019)

To continue the process of teaching and learning, online classes are going on in the whole of the country. Learning is taking place through online mode as the teaching by traditional methods is just not possible due to Covid-19 pandemic. In the current scenario, the online education system offers many opportunities but there are several challenges also.

Literature Review

Muirhead (2000) concluded that online education to be fully effective, computer technology must be more reliable, bandwidth must be increased, professional development must be expanded, student orientation and interaction must receive more attention, and better online

instructional design models must be developed. Martinez (2004) opined that since effective design principles have been validated in the literature for traditional classroom education, these principles offer a solid foundation for designing any kind of education. These design principles include Encourage student and faculty contact, Encourage reciprocity/cooperation among students, Use active learning techniques, Give prompt feedback, Emphasise time on task, Communicate high expectations, Respect diverse talents and ways of learning. The integration of distance education into higher education represents both a threat and an opportunity. While it provides the potential to reach a new audience in a new way, it also brings the possibility that it will radically alter the institution in which it is implemented (Folkers, 2005). Zapalska and Brozik (2007) concluded that in order to help students succeed in online education, instructors must understand how they learn, how they perceive, and how they process information. Learning styles of online students must be identified so that the instructor can plan appropriate teaching strategies to accommodate individual strengths and needs. Mbuva (2014) explained the advantages of an online education system over the traditional education system. Drawbacks of the learning management systems such as blackboard, e-college, LMS, Canvas etc. are discussed. It is concluded that both teacher and the taught requires a good degree of familiarity with the learning management system. Sibirskaya et al. (2019) concluded that remote education (online education) is indeed much more effective at the micro level since it allows the students to receive similar education services with greater convenience and at a lower cost compared to traditional education. Furini et al. (2020) shared their experience built building ONELab, a system designed to capture, record, edit and stream video lectures. Downing (2020) concluded that students believe that content delivery is still best achieved in a traditional classroom setting but live interactive video online, watching video online are a close second.

Online Education in India

India, a developing economy from Asia, formally experienced online education only in 2008. Recent research proves that country-level factors of India are providing impetus to the growth of online education in the country, and with the active participation of governments at all levels, this market is expected to record continuous growth in the coming years too. (Palvia et al., 2018) Technology-led reach and easy access will bring about a socio-economic difference in the lives of Indian learners (Lone, 2017).

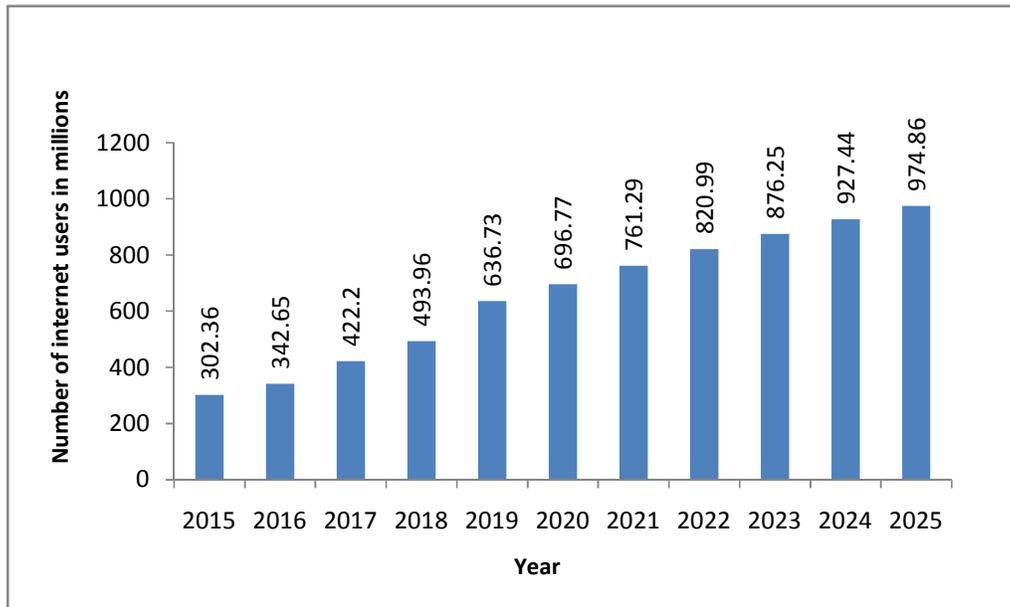
The Coursera's inaugural 2020 impact report, on online learners elaborates on key trends identified between the dates September 15, 2019 and September 15, 2020. With 9.8 million online learners, India ranks second on online learning platform. The United States ranks on top with 14 million learners.

The online education market size in India is expected to grow by USD 14.33 billion during 2020-2024. The report also provides the market impact and new opportunities created due to the COVID-19 pandemic. (www.businesswire.com, 2020)

India has the world’s largest population of about 500 million in the age bracket of 5-24 years and this provides a great opportunity for the education sector. The education industry in India is estimated to reach US\$ 144 billion by 2020 from US\$ 97.8 billion in 2016. Education sector in India remains to be a strategic priority of the government. Skill India Mission 2015 aims at skilling around 400 million youths in the country by 2022. (www.ibef.org)

Internet users are growing continuously at a steady pace every year, the same trend is expected to continue in future years also in India. Number of internet users in India from 2015 to 2020 with a forecast until 2025 (in millions) is shown in Figure 1.

Figure 1 Number of internet users in India



Source: <https://www.statista.com/statistics/255146/number-of-internet-users-in-india>

It is clearly shown in the Figure 1 that the internet users have more than doubled in year 2020 as compared with year 2016.

The survey report of 2019 by the Internet & Mobile Association of India and Nielsen also added that India is having the second largest internet users after China. Rural India has more internet users than urban area.

Opportunities in Online Education in India

Emerging approaches and initiatives of Government of India

The government allowed top 100 universities of the countries automatically allowed to start online education courses from May 30, 2020. Around 2,000 courses on management,

technology, engineering, artificial intelligence, humanities, pure science and commerce streams are currently available on the Swayam platform. Authorities believe that such a move is necessary for the sustainability of the scheme called 'Swayam'. Swayam Prabha DTH channels were launched to support and reach those who do not have access to the internet. 12 more channels have been added.

The new national curriculum and pedagogical framework for school, early childhood and teachers will be launched; integrated with global and 21st-century skill requirements. Manodarpan, an initiative for psychosocial support of students, teachers and families for mental health and emotional wellbeing is launched. The government launched PM eVIDYA- A programme for multi-mode access to digital/online education. These have several components including online education by universities and TV channels for class 1-12. One earmarked channel per class from 1 to 12 (one class-one channel). Extensive use of radio, community radio and podcasts should be done. SWAYAM PRABHA DTH channels to support and reach those who do not have access to the internet. 3 channels were already earmarked for school education; now another 12 channels are also added. In order to implement this scheme, the government had coordinated with the different state governments, to share air time (4 hrs daily) on the SWAYAM PRABHA channels to telecast their education related contents. DIKSHA, a platform launched by the government for school learning. The government also tied up with private DTH operators like Tata Sky & Airtel to air educational video content to enhance the reach of these channels. A provision also has been made for the telecast of live interactive sessions on these channels with experts from home through Skype. SHAGUN is an online junction under the Department of School Education of the government of India and that of all the states and union territories. The primary aim of the SHAGUN initiative is to facilitate both the teachers and students with a platform where they can interact, however through the digital medium for further learning. National Foundational Literacy and Numeracy Mission for ensuring that every child attains Learning levels and outcomes in grade 5 by 2020 will be launched by December 2020. Recently two hundred new textbooks have been added to e-Paathshaala.

The Ministry of Human Resource Development (MHRD) of India announced various free digital e-Learning platforms on March 21, 2020. MHRD initiated a number of projects to assist students, scholars, teachers and lifelong learners in their studies. These projects are as follows.

1. SWAYAM (<https://swayam.gov.in/>) provides open online courses with one hundred and forty universities approved credit transfer feature. Above nineteen hundred courses are covering school & higher education.
2. SWAYAMPBABHA (<https://www.swayampbabha.gov.in/>) provides high quality educational programs that can be accessed any time through 32 DTH channels.
3. National Digital Library (NDL) (<https://ndl.iitkgp.ac.in/>) is a repository of e-content on multiple disciplines from primary to PG level. It has 4.3 crore content (Text / Audio / Video / Simulation /Graphics), harvested from 250 sources; in more than three hundred languages.
4. e-Yantra (<https://www.e-yantra.org/>) provides hands on experience on embedded systems.

5. FOSSEE (<https://fossee.in/>) is an acronym for Free/Libre and Open Source Software for Education, which is developed to promote open source software for education as well as for professional use.
6. Virtual Labs (<http://www.vlab.co.in/>) has developed web-enabled curriculum based experiments designed for remote – operation.
7. e-gyankosh (<http://egyankosh.ac.in/>) is a National Digital Repository to store and share digital learning resources. Its content is developed by the open and distance learning institutions in the country.
8. Gyan Darshan (<http://www.ignouonline.ac.in/gyandarshan/>) is a web based TV channel devoted to educational and developmental needs for open and distance learners.
9. Gyan Vani (105.6 FM Radio) & Gyandhara (web radio) (<http://ignouonline.ac.in/Gyandhara/>) It is an internet audio counselling service where students can listen to the live discussions by the teachers and experts on the topic of the day and interact with them through telephone.
10. DIKSHA (<https://diksha.gov.in/>) is a national platform for the teachers and all the other learners.
11. Epathshala (<http://epathshala.gov.in/>) provides free access to e-books (class I to XII) through its website and app.
12. e-PG Pathshala (<https://epgp.inflibnet.ac.in/>) is a gateway for e-books up to PG level which provides high quality, curriculum based, and interactive content in different subjects across all disciplines.
13. e-ShodhSindhu (<https://ess.inflibnet.ac.in/>) is a collection of e-journals, e-journal archives and e-books on perpetual access basis. It has more than ten thousand e-journals and more than thirty one lakh and thirty five thousand e-books.
14. Shodhganga (<https://shodhganga.inflibnet.ac.in/>) is a platform for research students to deposit their Ph.D. thesis and make it available to the entire scholarly community in open access.
15. Shodh Shudhhi (PDS) (<https://pds.inflibnet.ac.in/>) is plagiarism detection software to encourage original information by preventing plagiarism.
16. VIDWAN (<https://vidwan.inflibnet.ac.in/>) is an expert database and a national research network which has profiles of scientists and researchers and other faculty members working at leading academic institutions.
17. Spoken Tutorial (<https://spoken-tutorial.org/>) is a tutorial in IT applications which provides self-training in the IT field.
18. NEAT (<https://neat.aicte-india.org/>) is an AI adaptive learning portal. This is an initiative for skilling learners in latest technologies through PPP model.
19. SAKSHAT (<https://sakshat.ac.in/>) is one stop education portal for addressing all the education and learning related needs of students, scholars, teachers and lifelong learners. The portal provides the latest news, press releases, achievements etc. related to the ministry of HRD.

Free external educational repositories by UNESCO

In order to help educational systems cope up with the difficulties caused by Covid-19 pandemic in different countries, some free educational repositories are suggested by UNESCO (United Nations Educational Scientific and Cultural Organization) as listed below.

Collaboration platforms that support live-video communication

Dingtalk, Lark, Hangouts Meet, Teams, Skype, WeChat Work, WhatsApp and Zoom.

Digital learning management systems

CenturyTech, ClassDojo, Edmodo, Edraak, EkStep, Google Classroom, Moodle, Nafham, Paper Airplanes, Schoology, Seesaw and Skooler.

External repositories of distance learning solutions

Brookings, Common Sense Education, Commonwealth of Learning, Education Nation, EdSurge, European Commission Resources, GDL Radio, Global Business Coalition for Education, Keep Learning Going, Koulu.me, Organisation internationale de la Francophonie, Profuturo Resources, UNHCR and UNEVOC Resources.

Massive Open Online Course (MOOC) Platforms

Alison, Canvas Network, Coursera, European Schoolnet Academy, EdX, iCourse, Future, Learn, Icourses, TED-Ed Earth School and Udemy XuetangX.

Mobile reading applications

African Storybook, Biblioteca Digital del Instituto Latinoamericano de la Comunicación Educativa, Global Digital Library, Interactive Learning Program, Reads, Room to Read, StoryWeaver and Worldreader.

Self-directed learning content

ABRA, British Council, Byju's, Code It, Code.org, Code Week, Discovery Education, Duolingo, Edraak, Facebook Get Digital, Feed the Monster, History of Africa, Geekie, KhanAcademy, KitKitSchool, LabXchange, Madrasa, Mindspark, Polyup, Mosotach, Music Crab, OneCourse, Profuturo, Quizlet, SDG Academy Library, Siyavula, Smart History and YouTube.

Systems built for use on basic mobile phones

Cell-Ed, Eneza Education, Funzi, KaiOS, Ubongo and Ustad Mobile.

Systems with strong offline functionality

Kolibri, Rumie and Ustad Mobile.

Tools for teachers to create of digital learning content

Thinglink, Buncee, EdPuzzle, EduCaixa, Kaltura, Nearpod, Pear Deck, Squigl and Trello.

Challenges in Online Education in India

Majority of online education is dependent on the internet only. **Internet connections, devices** like computer or smartphone, electricity and data pack are major challenges of online education. There is variation in internet connectivity throughout the country and internet speed poses a very big challenge. Continuous electricity supply is not available to all parts of the country. Cost for utilizing the online education facility fully also poses a very big challenge to many.

In a virtual classroom, the student may get distracted towards other websites on the net; at times the parental guidance is just not possible. Parents of every student are not that much net savvy and vigilant to understand and know about what kind of the online content their child is accessing. There is a problem in conducting practicals, continuous evaluation tests and examinations which are supposed to be conducted at regular intervals. Invigilation during examinations through online mode seems to be incompetent in front of that in the offline mode.

Discussion and Suggestions

To give the best of the education to the students, reforms in the whole system of education is required as such so that their health and eyes are not affected by this online learning. Books should be of the kind which is specially made for distance learning so that the content of the books should be in simple language and to the point and so every student can understand the subject matter with the help of minimum guidance. People who do not have internet access the same content should be telecast on television so that even the have nots in the society are not losing out. In today's context T.V. channels and F.M. channels can be a very good medium for the education system. Twelve more educational channels have been added by the central government. When the teacher is teaching on T.V. or F.M. channels, care should be taken that the subject matter should be simple and should be explained in such a manner that just by listening, the student should understand the material. For others in society, children can also use this system for their good health.

There are many channels on YouTube which are used by students to study the various topics in its totality. There are many YouTube channels which demonstrate various experiments for practical examinations in schools/ colleges/ universities. Similar kind of model can be implemented on educational T.V. channels.

Exam or evaluation are supposed to be performed or taken in an online manner to save the young population from the Covid-19, and the social gathering must be avoided at any cost. The exam can be conducted in the form of online presentations, viva-voce, assignments, case studies, projects and multiple-choice questions. The question paper can be designed in such a manner as that of the open book examination system. In order to conduct examinations, multiple online sets with the same level of the toughness should be prepared, and enough care must be taken in case of cybersecurity. The video and audio should be switched on of the examinee while conducting the examination.

Many students in India do not have the required devices for attempting an online examination. Schools and examination bodies depending upon their capacities can provide devices to students at their places for examination purpose in turns to conduct the examination in phases.

Conclusion

Presently the people of India are waging war against Covid-19 pandemic. The education system has already moved from traditional to online. The online education system is the need of the hour. Students must be protected from Covid-19 pandemic. Learning and teaching are very much possible in an online mode. The online education system was prevalent even before this pandemic. But most of the online education system is dependent on the internet only. Many of the students do not have internet access. Most of the teaching and learning is taking place in an online mode. The traditional education system is just not possible in today's context. A substitute for the online education system has already been found, but more should be done in this regard as discussed in this research paper.

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