Online Education During Pandemic and Its Impact in India

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Abstract
The pandemic Covid-19 has spread over the whole world and compelled human society to maintain physical distancing, which has significantly disrupted the education sector. According to a UNESCO report, it had affected more than 90% of the total world's student population during mid-April 2020. In India, more than 32 crores of students have been affected. Lockdown disturbed the schedules of every student though it is an exceptional situation in the history of education. COVID-19 has created many opportunities to come out of the rigorous classroom teaching model to a new era of the digital model and taught many lessons and created many challenges and opportunities for the educational institutes to strengthen their technical knowledge and infrastructure. New ways of delivery and assessments of learning opened immense opportunities for a major transformation around curriculum development and pedagogy. However, it has a negative impact as well. This involves, of course, the inability to access the digital world and global education, significant impact on educational activities, employment, and lack of nutrition due to school closure. Studies also show a significant increase in mental illness cases among students. Thus, the presentation will focus on comparative discussion based on the reviewing literature and declared data and documents and will cover the overall impact of online education in terms of positive and negative in the areas of school and college education in India, which would include all relevant areas related to academics as well as mental health.

Keywords: Online Education, Impact of Online Education, Education in India

Introduction

The pandemic COVID-19 was a global health crisis that had a profound impact on society and possibly every aspect of human life. It spread over the whole world and compelled human society to maintain social distancing. In response to the pandemic, governments around the world have taken unprecedented measures to try to slow the spread of the virus. This has included closing borders, imposing travel restrictions, mandating the wearing of masks, restrictions on social gatherings and even closing educational institutions. There has been a significant change in overall lifestyle as well as daily living and forced people to adapt to new ways of living and interacting. The need for physical distancing has led to a decline in face-to-face interactions and social activities with the widespread adoption of remote work even in academia. It resulted in a massive shift towards online education. Due to widespread school closures and a shift towards online learning, many educational institutions have had to quickly adapt to remote learning methods in order to continue providing students with access to education. Although online education has been around for some time, the pandemic has accelerated its adoption and brought it into the mainstream. However, it disrupted the education system around the world and created new challenges for students and teachers.

Global impact: significant study loss

The shift to online learning and school closures has disrupted traditional education systems and created new challenges for students and teachers. This was considered as largest disruption to education in history, which caused significant learning loss globally, affecting students of all ages and backgrounds. About 1.5 billion children worldwide endured school closures during the COVID-19 pandemic (Ethiraj, 2022; India Today, 2022). According to the UNESCO report, it affected more than 90% of total world's student population during mid-April 2020, which reduced to nearly 67% during June 2020 (Jena, 2020). Another report published by UNESCO in August 2020 stated that 31% of schoolchildren worldwide (463 million) cannot be reached by the broadcast- and Internet-based remote learning policies either due to the inadequacy of gadgets at home, or could be due to the poor implementation of the policies.

Another study depicted the condition of the Netherlands, which underwent a relatively short lockdown (8 weeks) and featured an equitable system of school funding and the world's highest rate of broadband access. The study revealed around 3 percentile points of learning loss, which can be considered as one-fifth of a school year. The study also stated that the losses were up to 60% larger among students from less educated homes, leading to worry about the uneven impact of the pandemic on children and families (Engzella et al., 2021).

It is important to know whether students are learning less in lockdown, or due to the disadvantaged condition students are learning less. Early studies on online learning platforms revealed decrease in completed coursework (Chetty et al.,2020). Survey evidence suggests that children spend considerably less time studying during the lockdown, and some (but not all) studies report differences by home background (Andrew et al., 2020; Reimer et al., 2021). Also, the estimation according to the UN (2020) 24 million children across the world might drop out of school in the aftermath of the pandemic, which is considered a large percentage. The estimation indicated the likelihood to join the workforce, given the rise in poverty during the pandemic.

Impact in India: significant study loss

India has played a very important role in the history of the education system. Although after the pandemic broke down, the government had taken several steps to combat the situation and to continue education in the best possible way. However, several studies and surveys reveal a significant loss in academics in the country. Surveys revealed a wide gap in the learning of students affected by the lockdowns (Outlook, 2022). The pandemic caused significant study loss in India, affecting millions of students across the country. The shift to online learning and school closures has disrupted traditional education systems and created new challenges for students and teachers.

The impact of school closure is now better understood through different surveys like the Union Ministry of Education's National Achievement Survey (NAS). Around 3.4 million students in 118,000 schools in 720 rural and urban districts were surveyed for NAS in Nov 2021, 1.5 years into the pandemic in India. It revealed the education level across the country had gone down, more so in some regions and areas, and among children of grades. Delhi (the capital of India), for instance, is among the five lowest-performing states for grade III but did much better for grade VIII. The average academic performance deteriorated from about 54% to 47% between 2017, when the last NAS was conducted, and 2021 (Ethiraj, 2022). The ASER survey in West Bengal (a state in the eastern part of India) found that 27% of children in Class III could barely read Class II texts, against 36% in 2018 and 33% in 2014. About 48% of students in Class V can barely read Class II texts, which means that though they've moved three school years ahead, their learning levels are still three years behind (Law, 2022). A study by Azim Premji University (Field Study in Education) revealed shocking data about learning loss. It reported, during COVID-19, 90 per cent of students have lost at least one language ability and 80 per cent of students have lost at least one mathematical ability.

The dropout rate is at its peak (Bhikale, 2022). A leading newspaper in the country reported less than 50 per cent of children can catch up with their age-appropriate learning following the Covid-19 pandemic and tend to get distracted more (Outlook, 2022). In their survey, Smile India Foundation of India, included 48,000 students which covered urban, rural and aspirational districts of 22 states. As per its findings, teachers in schools and educational institutions state that less than 50 per cent of children have been able to cope with the learning loss over the last two years and can catch up on their age-appropriate learning currently (Smile India Foundation, 2022). This survey also pointed out that 63% of Grade-3 students do not know how to make sentences, 65% of students are not able to read subject texts and solve cognitive tasks in English and Mathematics, and 51% of students were unable to do multiplication up to 10 and solve basic divisions.

In another survey reported by Oxfam India in September 2020 that over 80% of parents reported that education is not being delivered during the lockdown; in some states or regions this figure was 100%. This may be attributed to the fact that lack of awareness amongst parents as well as children about modes through which education was being delivered or the unavailability of devices and/ or mediums to access education being delivered. Although, 85% of rural children will be excluded from its purview since only 15% of rural households have access to the internet.

As the mode of education had to change almost overnight, hence there had been a significant issue around the implementation of academics so that it can reach the entire population. The dominant mode was WhatsApp (75%) followed by phone calls between the teacher and the

student (38%) (This was similar to how private schools have also depended on the delivery of the education). Over 75% of parents reported a host of challenges in supporting children to access education digitally including not having an internet connection, being unable to afford data, and internet speed/signal is not conducive (Oxfam India, 2020).

Impact on teachers and parents

An academic system cannot be discussed without teachers and parents. In the pandemic scenario, both were impacted heavily. In some cases, it was found that parents were not able to pay adequate attention to their children during the pandemic and home-based academics. On many occasions, concurrent effects on the economy make parents less equipped to provide support, as they struggle with economic uncertainty or demands of working from home (Adams-Prassl et al., 2020; Witteveen & Velthorst, 2020). This was the scenario in India as well. However, the Smile Foundation survey noted an interesting finding that parents in India showed more involvement of their child's education since pandemic. Nearly 47 per cent of the parents felt there was an increase in interaction between them and teachers in schools as well as over phone calls, 37 per cent of parents started interacting more with teachers by visiting schools. There has also been a 27 per cent increase in attendance in parent-teacher meetings (PTMs).

Although there had been some positive side, however, the flip side of the situation was also evident. Oxfam India (2020) reported a staggering 84% of teachers reported facing challenges in delivering education digitally with close to half the teachers facing issues related to the internet (signal issues and data expenses. Two out of every five teachers lack the necessary devices to deliver education digitally; the situation is particularly grave in some states (Uttar Pradesh and Chhattisgarh) where 80% and 67% of teachers respectively lack the required devices for online education. The challenges were directly linked to a lack of teacher preparedness. Less than 20% of teachers reported receiving orientation on delivering education digitally while in some states (Bihar and Jharkhand), the figure was less than 5%.
Over half the teachers surveyed believe low-tech and accessible technology, physical learning materials are more effective than digital mediums. This scenario made it even more difficult to hold online classes and also a difficult job for a teacher to ensure 100 per cent engagement in class. The pandemic has created a clear division of digital use.

Response from Indian leadership

To prevent the spread of the pandemic, the Government leadership team had taken several preventive measures. The union government declared a countrywide lockdown of all educational institutions on 16th March 2020. However, almost all state government ministries have taken measures to ensure that the academic activities of schools and colleges should not hamper during the lockdown period and have instructed the schools to conduct all their academic activities online. Looking at this challenge of schools and colleges being shut down, the Government of India, as well as state governments and private agencies have undertaken initiatives. The Ministry of Human Resource Development (MHRD) had made several arrangements, including online portals and educational channels through Direct to Home TV, and radio for students to continue their learning. During the lockdown, the students were using popular social media tools. However, the MHRD initiative of using the e-Broucher (https://mhrd.gov.in/ict-initiatives) platform combined all digital resources for online education. Those are listed below:

BHARAT NET scheme has been made available to Govt institutions to improve internet connectivity in rural areas.

MEITY has been assigned the task of providing Fibre to the Home (FTTH) connectivity to Government Institutions, including schools. This project is for providing Internet connection to Government schools in respective Gram Panchayats.

DIKSHA is a portal that contains e-Learning content for students, teachers, and parents aligned to the curriculum, including video lessons, worksheets, textbooks and assessments under the guidance of the National Council of Educational Research and Training (NCERT).

E-PATHSHALA is an e-Learning app by the National Council of Educational Research and Training (NCERT) for classes 1 to 12 in multiple languages.

The National Repository of Open Educational Resources (NROER) portal provides a host of resources for students and teachers in multiple languages including books, interactive modules, and videos.

PRAGYATA Guidelines on Digital Education were developed while keeping in view the availability of digital infrastructure. This guideline briefs on various modes of digital education including an online mode that depends more on the availability of the internet, and a partially online mode that utilizes the blended approach of digital technology and other offline activities.

There had been several other attempts to enable online education benefit to children of every category and teachers. To achieve that agenda several Learning Enhancement Guidelines have been issued. Those were:

SWAYAM, which is a national online education platform hosting 1900 courses covering both school (classes 9 to 12) and higher education (undergraduate, postgraduate programs).

SWAYAM PRABHA is 32 DTH TV channels transmitting educational content on a 24 x 7 basis, and

E-PG PATHSHALA, which is for postgraduate students, can access this platform for e-books, online courses and study materials during this lockdown period.

Challenges

Due to the pandemic, there had been several challenges surfaced among which the unavailability of the content was important. In a report Ministry of Human Resource Development in 2020, stated that the decision on home delivery of textbooks to children was taken. An overwhelming 71% of the teachers are of the view that textbooks should reach children before schools reopen. However, the scenario was different. Studies showed that over 80% of children have not received textbooks for the next academic year. The situation is slightly better in one state where 31% of students have received textbooks. The condition was almost similar in terms of online materials as well. 43% of parents in rural areas said no online material was sent by the school, while 36% said their children did not have smartphones. The Annual State of Education Report in 2021 noted that 67.6 per cent of students' families had one android phone (Bhikale, 2022).

Oxfam India (2020) stated that 82% of parents reported a combination of challenges in supporting their children to access education in terms of signal/internet speed issues (53%), data being too expensive (32%), don't have a device (23%), difficulty in negotiating software (19%), and no internet connection (18%). Despite the sample consisting of parents belonging predominantly to urban areas and being digitally literate, 82% still faced challenges in supporting their children to access digital education. 85% of rural children will be excluded from its purview since only 15% of rural households have access to the internet – this figure is even lower for marginalized social groups.

From the discussion, it is evident that covid 19 pandemic has had a significant impact on education in India. With the sudden closure of schools and colleges, students, teachers, and educational institutions have to adapt quickly to new methods of learning and teaching. This was a difficult ask in a divergent country like India.

Opportunities

Online learning had been around since many years and found to be advantageous such as flexibility (Smedley, 2010), interactivity (Leszc-zynski et al., 2018), and self-pacing (Amer, 2007). The adoption of this method was slow in specific in some countries. In the pandemic situation, this was the dominant and was only way to continue academics, which had some positive impact as well. It opened opportunity to access to global digital content as well as its ease to access the contents. Academics are moving more towards the blended learning and this change will continue in future. There has been a significant change in collaborative work while sitting remotely taken place. Many platforms had developed and existing platforms extended there services to achieve this goal. This also increased worldwide exposure and sharing of information. In some areas and groups a sudden increase in participants on online learning and research innovations were noted. The crisis situations and to attempt to cope with the situation increased the digital literacy among students as well as in general population.

Conclusion

Surviving a pandemic is undoubtedly a difficult ask. Addressing and coping the situation made people innovative in many ways. Although the online education was not a new concept, however, there has been a significant modification taken place in this field during the pandemic. At the same time it cannot be ignored that online mode of learning can ve useful for content knowledge as well as communication skills. However, pandemic made it clear that nothing can substitute schooling. Education is a continuous process of developing a child's intellectual, mental and emotional quotient. There are many areas of learning which are difficult to deliver online, especially issues related to hands-on experiences. Also children learn better in one-to-one situation and it is easy to engage a child in a class rather than in home atmosphere. Hence, the hybrid mode of teaching can be more useful to deliver alround education. Also, through the help of online machine learning and artificial intelligence we can easily bridge the learning gap of our students.

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