Impact of COVID-19 on Education System of India

Rashmi Singh Dhurve

In-charge Principal, Government High School, Pali, Takhatpur, Bilaspur (C.G.), India
Corresponding author Email: *drrashmisingh003[at]gmail.com*

Abstract: *The COVID-19 pandemic causedan overwhelming influenceon the essential needs of the social segment such as food, education, health, and financial condition of every individual. The present review was focused on summarizing the positive and negative impact of COVID-19 on the education system of India. Recently, the education sector enforced the sudden shift from classroom teaching to digital learning using complex Information and Communication Technology (ICT) tools. Numerous online platforms e.g., Zoom, Webex, Google Meet, and Microsoft Team have been put forward to facilitate digital classroom teaching for teachers and students. Howe, the adaptation to digital platforms and lack of technical knowledge of students and teachers caused several obstacles but sequentially, the problems were shorted out. Depression, mental health issues, lack of sleep, obesity, arisen learning barriers, decreased communication skills, social isolation, cyberbullying, and privacy loss are some negative paradigms of the digital education system in the Indiancontext.*

Keywords: COVID-19 pandemic, education system, India, ICT, students, online platforms, digital education system

1. Introduction

A viral pandemic called COVID-19 has altered people's lifestyles globally. COVID-19 affected every corner of human life. Sequentially, it results from the shutdown of educational institutions e.g., schools, colleges, universities, and professional coaching classes. The first confirmed case of COVID-19 was noted in Kerala, India dated 27 January 2020 to a female patient (20-year-old) in Thrissur, Kerala (Andrews et al., 2020). Coronaviruses (CoV) cause respiratory severe diseases including Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (Petrosillo et al., 2020) and on 31 December 2019, China disclosed the update regardingsevere cases of pneumonia due to unknown etiologyreported in Wuhan city, Hubei to the World Health Organization (WHO, 2020) and they mentioned that 44 patients with pneumonia symptom due to unknown etiology was found between 31 December 2019 to 3 January 2020. The cases initially identified had a history of exposure to the Huanan Seafood Wholesale Market (Worobey, 2021). Fever (98.6%), fatigue (69.6%), and dry cough (59.4%) were the common clinical signature during early cases of COVID-19 found in Wuhan, China (Wang et al., 2020). COVID-19 outbreak was documented on 17 February 2020 with 70,635 cases and 1,772 deaths in China provenance and in outside China, there were 794 cases were noted (Dabashini Devi, 2022).

In the context of education, the governments have temporarily shut the schools due tothe COVID-19 pandemic, and later, as theyre-opened the schools, the cases of COVID-19 increased and schools shut again. This situation was overcome by certain initiatives e.g., online classrooms, but still,lots of students didn't own devices to attend the online classes. Hence, they suffer so much and struggledwith devices. Similarly, the counterpart is that the teachers are also struggling to adapt to digital teaching platforms, as they all are much more friendly with the Chalk and talk method of teaching since they joined. The worst part was that certain groups of students in India came to school for food (midday meal) and they couldn't bring food home and faced malnutrition. The high school students have the issue regarding the delay and cancellation of exams suddenly. It has been also marked that the school students were involved in child labor to feed their families. However, there are equal positive and negative impacts of Covid-19on society.
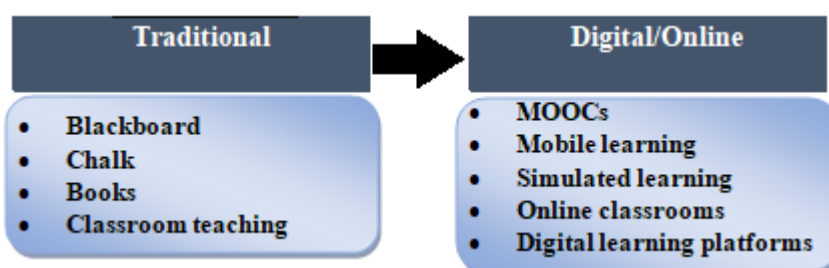
Figure 1: The transformation of education system from traditional to digital/online

The transformation of traditional to digital/online education system during pandemic is depicted in fig. 1. The technological advancementcovers the best possible way for educating students and helping teachers to link virtually to students through online platforms.But the dark truth was that these facilities were not available to most ofthe students over the nation. Although, the parents struggled a lot to arrange smartphones for their children. Subsequently, several government initiatives, NGOs, and private institutions offer free and easily accessible educational materials for students from nursery to Ph.D. students, and the education was almost a line-up with certain positive and negative impacts. The present review deals with a briefreview onthe impact of COVID-19 on education in India.

Impact of COVID-19 oneducation system
The mode of education was shifted from classroom to online platforms, and accordingly, the teaching pedagogy upgraded to digital pedagogy. Digital pedagogy deals use of digital technologies and teaching aids for digital education. But, initially during COVID-19, the implementation ofdigital learning required teachers' training, technical support, and high bandwidth internet connections (especially in remote areas and rural belts) which was not possible at that time. Later, some Schools, Higher Education Institutions (HEIs), and higher education collectively organized several online workshops, training, and Faculty Development Programs (FDPs) for teachers to be aware of digital education technology and available tracing aids. Further, the assessment and evaluation of student performance using the digital platform were not reliable because students may take help from others to take exams. The research platform e.g., conferences and seminars have also been adversely affected (Hutton et al., 2020) Nevertheless theseresearch events have shifted to an online mode and the organizers havenoted an increased rate of participation and popularity(Cao et al., 2020). The most terrible part of digital education is the occurrence of mental health issues and the spreading of job insecurities among students and adults during COVID-19 pandemic (Sahu, 2020).

Iyer et al. (2020) conducted research on the effects of COVID-19 on higher secondary education with special reference to engineering mathematics science,technology, and education system and gathered data telephonically from public school teachers (PST), and reported a significant drop in student's academic performance.Gothwal et al. (2020) highlighted thatonline platforms offer students to work in peace of mind, staying at home savesenergy, money,and time that need to be input for traveling in case of classroom study. Hence, they can their precocious time to themselves for betterment. Though, the conduction of the practical part of the subject in laboratories and fields was counted asa major constraint during COVID-19 time. However, virtual labs are available before the pandemic but still they can't beat real-time laboratory and field experience.Hence, there are both positive and negative impactshas been fall overeducation system around the world.Bambakidis& Tomei (2020) claimed that there are plenty ofonline platforms offeringquality lectures, studymaterials, training,etc. to make learning easier than earlier. But the lack of physical face-to-face discussion among teachers and students and the lack of discipline during classes have adversely affected education.

Several online platforms are available for lectures, training, etc., which have made learning easier (Bambakidis& Tomei, 2020). However, in the absence of contact teaching, a one-to-one discussion between a teacher and students is adversely influenced. The chances of filling this lacuna are also not assured because the students will probably be deprived of contact learning before being promoted to the next level. This again leads to next-level difficulties that these students may face shortly soon due to unclear concepts of previous standards/grades (Sintema, 2020). Also, in the absence of a formal class environment, the student's concentration is more likely to be adversely influenced. Additionally, flexible classes reduce positive pressure, network troubles interrupt the flow of the study, and students sometimes mischievous in classes by fake IDs (identities), intentionally making noises, unnecessary comments,and other similar problems encountered during online classes.

The students belonging to lower socio-economic backgroundswerenot able to use online learning platforms due to the unavailability of smart devices and high internet recharge rates. This might create unfairnessconcerningthe Right to Educationfor all. India has still a huge population thatbelongs to the rural belt and they are not technology friendly, hence they face difficulty to opt for and use online learning. The advantages and disadvantages of shifting traditional education to digital education are mentioned in the Table 1 (Gothwal et al., 2022).

Table 1: Advantages and disadvantages of shifting traditional education to digital education

S.No.	Advantage	Disadvantage
1	A flexible and convenient way of learning.	Learners have issues with adopting digital pedagogy.
2	Digital pedagogy might support asustainable education system.	Reliable assessment and evaluation of learners/students may have difficulties inthe present scenario.
3	Offer pace of education.	Lack of internet facilities and technical support in rural belt and remote areas might lead to certain limitations.
4	It saves time, energy, resources, and money for learning.	Novelty and significant performance might not be assured
5	Simulation and virtual aids are available for learners	The nonexistence of practical and field training might decrease the real-world career opportunities
6	Educated people are adopting technologies	In an Indian context still,a large group of societies are unaware of digital learning environments
7	Plenty of online learning platforms are free. They may charge for certification only.	Still, most recruiters have nottrusted candidates produced through the digital learning education system.
8	This has offered several opportunities to professionals	The freshers might suffer with certification obtained from digital learning platforms.
9	Sometimes learners are more prone to indiscipline due to the availability of lectures recording and accessibility of Multiple platforms	Learners might suffer from certain physical problems such as lack of sleep, anxiety, and ophthalmological (eye-related) problems
10	Convenient learning	Numerous procedural works, strict guidelines, and lots of expenses.
11	Still need to improve the practical approach toward teaching and learning aids	Due to limited resources,the students do not experience practical exposure
12	Students can decide their comfort in terms of sitting facility, environment, and time slot.	Often students are not able to significantly concentrate in class for more than 20 minutes while the class time is generally about 30 to 40 minutes.

The central government unit National Council of Educational Research and Training (NCERT) inaugurated e-Pathshala in 2015 for school education where school students can access e-resources and study materials for free. It serves teachers, educators, and parents as well regarding school education. To facilitate the smooth running of schools in Chhattisgarh, the Government initiated "PadhaiTuharDuar Yojna-2022" for those students who do have not internet and smart device facilities. The school teachers took classes using loudspeakers in rural belt areas. Another initiative called "Bulthuke Bol", in which the audio lectures were transferred to students' simple devices using Bluetooth during weekly market. Presently, the "PadhaiTuharDuar" portal has 5859744 enrolled students, 228581 registered teachers, 3203 learning videos, and 48157 virtual schools (till year 2023). The portal facilitated 203591 online classes till the year 2023.

Hence, During the pandemic, all wings of education bodies come together and offer numerous options and ways for virtual studies. However, the teachers and educators also did a lot regarding the same. Presently, the majority of education systems adopted an online mode of education for students and learners. For instance, EuroKids, Mother's Pride, and Little Laureates (Nalanda Learning Systems Pvt. Ltd) offer virtual (or online) education for Preschool students in India. Similarly, the professional programs from the Indian Institute of Technology (IITs) and coaching institutions (Unacademy) are adopted online mode using a virtual platform. Besides, private schools and colleges, the exact virtual or online learning system is still not incorporated.

2. Conclusion

COVID-19 boosts the use of online educational platforms and smart devices for delivering education to students. It has both advantageous and disadvantageous parts. The advantageous part includes time-saving, plenty of illustration-based colored study materials, flexibility, cost-effectiveness to those has already had smart devices with plenty of internet data, easy sharing of study materials, availability of recorded lectures at low cost to students, and much more. The disadvantages part are health issues, cyber security threats, lack of social interaction, interrupted sports activities, unavailability of smart devices, high internet recharge rates for students belonging tolower socio-economic backgrounds, mandatory technical knowledge, and similar constraints. Thereby, the blended mode of study might help to overcome the aforementioned issues related to education in India.

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