



Impact of Pandemic on different levels of Education in India

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Abstract

In India, a nation with wide-ranging socioeconomic and regional inequalities, the COVID-19 pandemic had a tremendous impact on educational systems around the world. The article examines the pandemic's complex effects on education at the primary, secondary, higher education, and open and distance learning levels. This article is based on reputed secondary sources. All levels of education in India were severely disrupted by the COVID-19 pandemic, which exposed structural vulnerabilities and exacerbated pre-existing inequalities. Children in marginalized areas who had little access to digital resources were disproportionately affected by school closures, which hampered social interaction, cognitive development, and basic learning at the primary level. Due to the difficulties of online learning and disruptions to board exams, learning gaps, dropout rates, and student anxiety have all increased significantly in secondary education. The shift to online platforms in higher education has exposed disparities in access to technology and internet connectivity, especially in rural areas. There have been major delays in academic schedules, examinations, internships, and placements, which have negatively impacted students' career paths. Despite being better equipped to withstand disruptions, open and distance education has faced challenges with infrastructure, inclusion, and student engagement. But it has also shown flexibility and resilience, becoming an important option in times of crisis.

Keywords: *Impact, Pandemic, Primary Education, School Education, Higher Education, Open and Distance Education.*

INTRODUCTION

Unexpected interruptions in education brought about by the COVID-19 pandemic forced a change to remote learning and revealed systemic injustices. Vulnerable groups were disproportionately impacted by these interruptions in India, a nation with millions of students enrolled in higher education and more than 250 million school-age children. The shift to online and hybrid learning presented difficulties at all educational levels and fundamentally changed the nature of education. Around the world, the COVID-19 epidemic caused an unparalleled upheaval in educational systems. In an effort to slow the spread of the COVID-19 virus, almost all governments ceased in-person instruction and closed schools between March 2020 and March 2022 (Our World in Data, 2022). Despite efforts by governments and schools to replace in-class lessons with remote teaching approaches, UNICEF predicts that over 1.6 billion children globally lost their education as a result of school closures (UNICEF, 2021). The entire nation has been placed under lockdown because to

the pandemic. 247 million students enrolled in elementary and secondary schools were impacted by the first wave, which saw 1.5 million schools in India completely closed for more than a year, according to UNICEF projections from 2021.

After the United States of America, India is the nation most impacted by COVID-19 worldwide. Therefore, stopping the COVID-19 epidemic from spreading is the Indian government's challenge. In order to stop the COVID-19 epidemic from spreading, the Indian government implemented a number of measures, including lockdowns and shutdowns, which led to the closure of all Indian educational institutions. All school exams were postponed indefinitely, and classes were suspended. Thus, the majority of students' education is negatively impacted by the lockout. Despite being a unique situation in school education history, the COVID-19 epidemic has opened up numerous opportunities to transition from the traditional classroom teaching approach to a new digital age. Teachers and students now have the opportunity to continue their instructional activities online thanks to the lockdown. The instructors used various apps, such as Zoom, Google Meets, Facebook, YouTube, and others, to conduct live video conferences and distribute homework to students online. The Indian government has built a number of digital projects, including DIKSHA, e-PATHSALA, SWAYAM, SWAYAMPRAVABHA, the National Digital Library, and others, that give students and teachers the chance to continue teaching and learning. However, it creates a lot of possibilities that make it harder for students from underprivileged groups to use any kind of technology to attend online classes.

The effects of the pandemic COVID-19 on Education in India: The education sector in India has been severely impacted by the epidemic, just like every other sector. The researcher also highlighted the government's efforts to deal with the pandemic and provide a suitable environment for those involved in this sector, as well as its advantages and disadvantages (Jena, 2020). Higher education and COVID-19: Present and future implications impact analysis, policy responses, and suggestions that highlight the actions made by many countries worldwide with appropriate statistics and how various stakeholders in this sector have responded to this scenario. Additionally, this report aids in the examination of the global situation. COVID-19 evaluating the effects on the education sector and anticipating the perspectives of stakeholders in various situations and government initiatives that aid in a more thorough investigation of the situation (Parthenon, 2020).

Some faculty members have encountered difficulties using social media to effectively communicate the teachings to their students throughout the transition to online learning and teaching. They also need to implement new methods for assessing the results of online learning. Some kids' dream learning has also been impacted by the lack of reliable internet connections, particularly in rural areas, which will also have an impact on their grade point averages (GPAs). Global transport has also been impacted by COVID-19. International admissions to higher education will also be impacted by this. Therefore, the impact of COVID-19 will make it challenging to pursue a desired job and will cause young students and recent graduates to feel anxious and apprehensive.

Objectives

1. To study the impact of Pandemic on Primary Levels of Education
2. To study the impact of Pandemic on School Levels of Education
3. To study the impact of Pandemic on Higher Levels of Education
4. To study the impact of Pandemic on Open and Distance Education System
5. To analyse the Positive and Negative impact of Pandemic on Education System

METHODOLOGY

This work is an analytical investigation. Its foundation is secondary data. The information was gathered from a various of sources, including national educational policy 2020, books, articles, newspapers, and reflective journals. Additionally, data is gathered from numerous COVID-19-related publications and papers issued by both domestic and foreign organisations.

Discussions

IMPACT OF PANDEMIC ON PRIMARY LEVELS OF EDUCATION

During the COVID-19 lockdown, schools rashly closed, affecting primary education globally. Almost all of the surveys that were done to find out how COVID-19 has affected pre-primary and primary education aimed at parents and teachers because it is difficult to include pre-primary and primary school students in surveys (Moss et al., 2020; Pensiero et al., 2020; Polydoros & Alasona, 2021; Putri et al., 2020). Studies that did not use surveys focused on modelling academic accomplishment and determining learning gain or loss.

1. **Educational Losses:** Primary pupils, who were especially vulnerable given their developmental stage, had protracted disruptions in their core learning as a result of school closures. Significant deficiencies in reading, writing, and maths were found in studies, especially for kids from underprivileged and rural areas.
2. **Digital Disparity:** Only 24% of rural Indian families had internet connectivity, making it difficult to access online education. Economically marginalised children were further excluded by the lack of digital equipment.
3. **Social-Emotional Development:** Younger kids experienced social isolation, which limited their chances for emotional growth and social contact.
4. **Government Efforts:** By providing televised and digital instructional information, initiatives such PM eVIDYA and Diksha sought to close gaps. However, because of linguistic and infrastructure limitations, their reach remained uneven.
5. **Higher dropout rate:** Between 2018 and the epidemic, the dropout rate more than tripled.
6. **Learning inequality:** As a result of the digital divide, the transition to digital platforms exacerbated learning inequality and forced many kids out of school.
7. **Long-term consequences on nutrition and health:** Children's nutrition and health were negatively impacted for a long time by not attending school.

The pandemic presented previously unheard-of difficulties, but it also acted as a catalyst for changes to India's educational system. Now, the emphasis must be on closing the achievement gap, bolstering the digital infrastructure, and guaranteeing that everyone has fair access to high-quality education.

IMPACT OF PANDEMIC ON SECONDARY LEVELS OF EDUCATION

Attending school is the best public policy tool available for improving abilities. Children can develop their social awareness and social skills while having fun at school. The primary reason for attending or remaining in school is to improve the child's abilities. Relatively little time spent in education improves aptitude and abilities. On the other hand, skipping class or not going to school will hinder the development of new skills.

The way that education is structured has been impacted by school closures. First, it had an impact on the methods of instruction and evaluation. The small number of private schools that offer online courses have embraced online teaching techniques. Students in those schools are enrolled in online courses. Conversely, low-income government and private schools are shut down entirely and lack access to e-learning resources.

Students' learning is being affected. The shift in teaching methods is causing parents to deal with a number of problems (Tarkar, 2020).

1. Learning Disruptions

- **Extensive School Closures:** For months, secondary schools were closed, which seriously disrupted academic schedules and delayed curriculum completion.
- **Learning Losses:** Secondary school students experienced significant learning losses, especially in disciplines like science and maths that call for conceptual knowledge.
- **Exams and Assessments:** Due to the cancellation or postponement of board exams, alternate means of evaluation were used. Parents and pupils experienced stress and confusion as a result.

2. The Growing Digital Gap

- **Limited connection to Online Learning:** A significant portion of students in high school did not have reliable internet connection or devices. Students from under-represented groups and girls were disproportionately impacted.
- **Quality of Online Education:** Due to a lack of interactive techniques and inadequate instructor preparation, online education frequently fell short of in-person learning, even for those who had access.

3. Effects on the Psychosocial Level

- **Mental Health Issues:** Due to loneliness, pressure to perform well in school, and uncertainty about the future, adolescents experienced elevated levels of stress, anxiety, and despair.
- **Social Development:** Students' social skills and emotional development were hindered by their lack of engagement with teachers and peers.

4. A Rise in Inequality

- **Financial Difficulties:** Many families experienced financial difficulties, which compelled students—especially older ones—to leave school in order to provide for their families. Early marriages were more likely to happen to girls.
- **Disparities in Educational Outcomes:** Students in urban areas who had greater access to resources were able to adjust more successfully than those in rural areas, which exacerbated already-existing disparities.

5. Changes in Teaching and Learning

- **Transition to Digital Platforms:** For virtual instruction, governments and educational institutions used programs like Google Classroom and Zoom as well as technologies like SWAYAM and DIKSHA.
- Teachers faced difficulties because many had no prior experience with online pedagogy. Teachers had to juggle their teaching obligations with pandemic-related tasks.
- **Parental Involvement:** Due to their own lack of knowledge or technological skills, parents, especially those living in rural areas, frequently found it difficult to assist their children's education.
- **Effect on Tests and Career Advancement**

- **Board tests:** Students' academic preparations were disrupted when important tests, such as the Class 10 and 12 boards, were cancelled or rescheduled.
- **Admission to Higher Education:** College applications were influenced by unclear exam schedules and alternate evaluation standards.
- **Skill Development:** At the secondary level, practical learning and vocational training were essential, but they were interrupted.

7. Interventions by the Government of India

- **Bridge Programs and Remedial Classes:** After schools reopened, states implemented programs to reduce learning losses.
- **Mental Health Support:** To address the psychological difficulties faced by students, certain governments established counselling programs and helplines.
- **Updated Curricula:** To lessen the workload for pupils and prioritise important subjects, curricula were modified.

8. Curriculum Gaps: Critical test years like Grades 10 and 12 were impacted by inadequate curriculum resulting from interrupted schooling. Exams at the national level, including entrance exams and CBSE board exams, were either rescheduled or administered in unusual ways.

9. Dropouts: As families put home duties or early weddings ahead of education, financial stress increased dropout rates, especially among girls.

10. Digital Adaptation Challenges: Teenagers had trouble adjusting to online learning settings, and their inability to communicate with peers and teachers decreased their effectiveness and level of involvement.

11. Mental Health Issues: Secondary school students experienced higher rates of anxiety and depression as a result of academic pressure and social isolation.

Although the epidemic revealed weaknesses in India's secondary education system, it also spurred innovation, especially in the area of technological integration. Reducing disparities, promoting mental health, and preparing kids for an increasingly digital and uncertain future are all necessary to meet these issues.

IMPACT OF PANDEMIC ON HIGHER LEVELS OF EDUCATION

Students' academic performance has also been impacted by university closures. One urgent step is necessary to guarantee the continuation of institutions and universities. The online teaching style is used to run the lesson efficiently. Universities use open-source digital learning solutions and learning management software to conduct online courses (Tarkar, 2020).

A key factor in determining the nation's economic destiny is higher education, and the epidemic has had a major impact on this sector as well. A large number of Indian students attend universities overseas. It is anticipated that the demand for international higher education will decline as a result of the closure of institutes and universities around the world.

The impact of the pandemic on employment rates is the primary concern that everyone is thinking about. Recently graduated grads are afraid that corporate employers may withdraw their job offers due to the current situation. The lockdown in India has also brought about changes in the way education is delivered in colleges and universities. New technologies have replaced the outdated chalk-talk model. In this regard, e-learning solutions are enabling teaching and learning; however, one significant problem with e-learning is

engagement. Policymakers are working to address the digital divide and student engagement issues. A multi-pronged approach is needed to address the problems in the Indian education sector.

An effective education and well rounded practices are needed in India to build the capacity of young minds in this time of crisis. To ensure the overall progress in India, It will drive employability, wellbeing, health and productivity through the development of skills.

1. Disruption of Academic Activities

- **Campus Closures:** Universities and colleges were closed for extended periods, halting in-person classes, research, and extracurricular activities.
- **Delayed Academic Calendar:** Admission processes, examinations, and graduation timelines were delayed, creating uncertainties for students planning higher studies or careers.

2. Transition to Online Learning

- **Adoption of Digital Platforms:** Classes shifted to platforms like Zoom, Google Classroom, and Microsoft Teams. Massive Open Online Courses (MOOCs) through platforms like SWAYAM and NPTEL gained traction.
- **Limited Practical Training:** Courses requiring hands-on experience, such as engineering, medicine, and lab sciences, faced significant challenges.

3. Mental Health and Well-being

- **Psychological Stress:** Prolonged isolation, academic uncertainty, and reduced peer interaction caused stress and anxiety among students.
- **Lack of Counselling Support:** Many institutions were ill-equipped to provide adequate mental health support during the crisis.

4. Research and Innovation

- **Interrupted Research Work:** Laboratories and research facilities remained closed, delaying ongoing projects and dissertations.
- **Focus Shift:** Research pivoted towards COVID-19-related studies, sometimes at the expense of other disciplines.

5. Economic Impact

- **Financial Strain on Institutions:** Reduced revenue from tuition fees, hostel fees, and other sources affected many private institutions. Funding cuts impacted public universities and their ability to sustain quality education.
- **Impact on Students:** Many students dropped out or deferred their studies due to financial hardships. Limited part-time job opportunities and internships compounded economic pressures on students.

6. Inequality and Access

- **Digital Divide:** Urban students adapted better to online learning compared to rural and underprivileged students. Gender disparities worsened as many female students faced additional domestic responsibilities or lack of access to digital tools.
- **Access to Resources:** Libraries, laboratories, and study spaces were inaccessible, limiting learning opportunities.

7. Examinations and Admissions

- **Examination Reforms:** Exams were postponed, canceled, or moved online, leading to alternative assessment methods such as internal evaluations or open-book exams.
- **Admission Delays:** Competitive exams like JEE, NEET, and university entrance exams faced delays, affecting students' academic progression.

8. Skill Development and Employability

- **Challenges in Skill-Based Learning:** Courses requiring internships or practical training, such as engineering, medicine, and management, faced major disruptions.
- **Employment Uncertainty:** Fresh graduates faced reduced hiring, delayed joining, and a freeze in campus placements, particularly in sectors like hospitality and aviation.
- **Rise in EdTech:** Platforms like Coursera, Udemy, and BYJU'S saw increased enrollment as students sought to enhance their skills during the lockdown.

The pandemic disrupted higher education in unprecedented ways but also catalyzed innovation and transformation. To build a resilient system, India must address issues of equity, mental health, and quality, while embracing technology to enhance access and learning outcomes.

IMPACT OF THE PANDEMIC ON OPEN AND DISTANCE EDUCATION SYSTEM

For many years, pedagogical and psychological research has examined distance learning in great detail (Palatovska et al., 2021). The transition from primarily asynchronous interactions to synchronous techniques made possible by the Internet, such as chat rooms and videoconferencing services, is one significant development in remote education. Digital platforms have also seen a significant shift in asynchronous content exchange (Virtic et al., 2021). A novel approach to communication and education is represented by distance learning. Under this strategy, a teacher may observe and communicate with pupils via chat as needed rather than broadcasting live. In distance learning, technological resources like online tests, simulators, movies, and audio podcasts are essential. In order to shape each student's unique learning path, it is also crucial to carefully monitor their performance.

Distance learning uses a computer game model, where new levels are unlocked only after finishing previous ones, although online learning attempts to mimic traditional classroom approaches (Bakhov et al., 2021). Due to its many advantages, such as the removal of time and location restrictions, quick access to resources, schedule flexibility, and cost effectiveness, eLearning has drawn more attention from educational institutions in recent years. The beneficial effects of eLearning on student outcomes have been shown in numerous studies, which highlight the significance of active student engagement, sometimes known as "active learning" (Aldossary, 2021; Altun et al., 2021). Frequently mentioned disadvantages include a lack of courses,

communication, and internet connection; lower teaching quality; difficulties teaching practical subjects; and technology issues that result in system unavailability (Altun et al., 2021).

1. Increased Demand for ODL Programs

- **Growth in Enrollment:** Traditional educational institutions' shift to remote learning blurred lines with ODL, leading to increased interest in flexible learning programs. IGNOU and other open universities reported higher enrollment figures, especially for skill-based and professional courses.
- **Awareness and Accessibility:** The pandemic raised awareness about the flexibility and affordability of ODL programs, attracting a more diverse demographic, including working professionals and rural learners.

2. Role of Technology in Enhancing ODL

- **Digital Learning Platforms:** Learning management systems (LMS) like SWAYAM and MOOC platforms became central to ODL, offering video lectures, e-books, and interactive assessments. The availability of government-supported platforms such as the National Digital Library expanded resource access.
- **Live Classes and Virtual Interactions:** Integration of tools like Zoom, Microsoft Teams, and Google Classroom facilitated live interactions, fostering a sense of community among ODL learners.
- **Innovations in Assessment:** Online proctored examinations and project-based evaluations replaced traditional exams, ensuring academic integrity and flexibility.

Challenges Faced by ODL During the Pandemic

1. Digital Divide

- **Infrastructure Issues:** Limited access to reliable internet and digital devices excluded many learners, especially in rural and remote areas.
- **Regional and Socio-Economic Disparities:** Learners from marginalized communities struggled to benefit from ODL due to language barriers and limited digital literacy.
- **2. Institutional Preparedness**
- **Scalability Issues:** Institutions faced challenges in scaling up infrastructure to meet the surge in enrollments and online activities.
- **Faculty Training:** Many educators lacked training in delivering online content effectively, leading to gaps in learning outcomes.

3. Learner Challenges

- **Self-Motivation and Discipline:** Distance education demands high levels of self-regulation, which many learners found difficult without traditional classroom structures.

- **Mental Health Concerns:** Isolation and lack of peer interaction adversely affected the mental well-being of many ODL students.

4. Quality Assurance

- **Content and Engagement:** The rapid digitization of content sometimes compromised quality, with limited focus on interactive and engaging material.

Innovations and Responses in ODL

1. Hybrid Learning Models:

- Combining ODL's flexibility with traditional education's structure, hybrid models emerged as a viable post-pandemic solution.

2. Government Initiatives

- **SWAYAM and SWAYAM PRABHA:** The government expanded these platforms, offering free access to quality content for learners across the country.
- **PM eVIDYA Initiative:** This initiative aimed to provide multi-modal learning solutions, integrating television, radio, and digital platforms.

3. Institutional Strategies

- Open universities adopted adaptive technologies, such as AI-based personalized learning and analytics, to enhance student engagement.

4. Community-Led Solutions

- Local initiatives, such as digital hubs and mobile classrooms, addressed the digital divide in underserved regions.

POSITIVE AND NEGATIVE IMPACT OF PANDEMIC ON EDUCATION SYSTEM

Positive impact of Pandemic on All levels of education system:

Indian educational institutions have accepted the challenges and are doing everything in their power to provide students with seamless support services during the crisis, despite the COVID-19 pandemic's many negative consequences on education (Rawal, 2021). The opportunity to switch from a traditional to a modern educational system was granted to the Indian educational system. The following are examples of positive effects.

- **Increased digital literacy:** As a result of the pandemic, more individuals are learning how to use and understand digital technology.
- **Enhancement of teamwork:** There is a chance for collaborative teaching and learning to take on new shapes.
- **Encourage the use of soft copy learning materials:** Most students used soft copy materials for reference because they were unable to retrieve hard copies of study materials during a lockdown.

- Increase in online meetings: The pandemic has seen a significant increase in the possibilities of teleconferencing, virtual meetings, webinars, and e-conferencing.
- Growing demand for open and distance learning: Most students prefer this type of training during the pandemic because it encourages independent study, provides access to a variety of resources, and enables customized instruction depending on the needs of each student.
- More effective use of electronic media for information exchange: Students can now share course materials more quickly and their related inquiries can be resolved through email, SMS, phone calls, and social networking sites like Facebook and WhatsApp.
- Improved time management: Online learning helps students better manage their time during pandemics.
- Global exposure: Teachers and students have the chance to engage with peers from all over the world. Students adjusted to a global society.

Negative impact of Pandemic on All levels of education system:

The COVID-19 pandemic has had a significant negative impact on the all the levels of education (Rawal, 2021). It has had many detrimental effects on education, Educational activity is hindered: Classes have been suspended and schools have been closed. In India, some boards have already delayed the entrance exams and yearly exams.

- Lack of preparation on the part of teachers and students: Teachers and students were not prepared for the abrupt shift from in-person to online instruction.
- The role of parents: While some educated parents in urban areas are capable of providing guidance, others do not possess the necessary education to instruct children at home.
- Technology: Since many students, especially those in rural regions, have little to no access to the internet and might not be able to afford a computer, laptop, or appropriate mobile phone for their homes, online education may cause a digital divide among students. Many reports claim that the lockout has had a significant negative effect on India's poor children, as most of them are unable to research internet education.
- Make a Difference: This online teaching-learning method greatly divides students from wealthy and impoverished places, as well as those from urban and rural locations.

Conclusion

The pandemic has had a significant and varied effect on Indian education, promoting innovation while escalating preexisting disparities. Going forward, these effects can be lessened and a more robust educational system can be ensured by emphasising inclusive policies, investing in digital infrastructure, and using holistic approaches to learning. COVID-19 has had a significant impact on India's education system. Even though it has brought about a lot of difficulties, it has also led to a number of chances. In order to address the current COVID-19 dilemma, the Indian government and several education stakeholders have investigated the potential of Open and Distance Learning (ODL) by implementing various digital technologies. India lacks the necessary resources to use digital platforms to spread education throughout the country. The current selection of digital platforms will hurt kids who aren't as fortunate as the others. However, the Indian government and institutions are working tirelessly to find a solution to this issue. Integrating digital technology should be the top goal in order to give India's millions of young pupils a competitive edge. In order to be prepared for scenarios similar to COVID-19, educational institutions urgently need to improve their knowledge and IT infrastructure.

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