

ORIGINAL ARTICLE

Government Initiatives and the Dual Impact of COVID-19 on Indian Education: A Comprehensive Analysis

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Abstract

This paper examines the government's response to COVID-19 and its effects on India's education system, highlighting both positive and negative impacts. It analyses government reports, academic research, and educational surveys to study how central and state government interventions attempted to mitigate pandemic disruptions while accelerating digital transformation. The findings indicate that initiatives such as PM e-VIDYA, DIKSHA, and SWAYAM offered new digital learning opportunities. However, implementation challenges and existing inequalities resulted in significant learning losses and worsened educational disparities, affecting various socio-economic groups, geographic regions, and types of institutions. The paper contributes to understanding government response efficacy during educational crises and suggests recommendations for strengthening post-pandemic recovery efforts.

Keywords: COVID-19, education policy, India, government initiatives, digital education, educational inequality, learning continuity

Submitted: 19-Mar-2022

Accepted: 22-April-2022

Published: 13-May-2022

1. Introduction

The COVID-19 pandemic unleashed a crisis like no other the world has ever seen. It turned our lives upside down, challenging us in ways we never imagined and causing a collective struggle that reshaped our future. The World Health Organisation (WHO) on February 11, 2020, officially named the virus COVID-19, for Coronavirus Disease 2019. This virus was first identified in Wuhan, China, on December 31, 2019. Tragically, the first recorded death attributed to COVID-19 occurred on January 11, 2020, involving a 61-year-old man in Wuhan. Since then, the pandemic has profoundly impacted the world, affecting over 4.5 million people globally (WHO). In light of the increasing worldwide threat, the WHO announced COVID-19 as a pandemic on March 11, 2020. The first case of COVID-19 in India was reported on January 30, 2020, in Kerala, involving an individual who had a travel history to Wuhan. Following this, the first COVID-19-related death in India was reported on March 12, 2020. In response to the escalating health crisis, social distancing was decisively implemented as a key preventive measure to effectively curb the rapid spread of the disease. As a result, countries around the globe enforced lockdowns, with India executing a nationwide lockdown in March 2020. This unprecedented move significantly impacted the education system, affecting approximately 250 million students across 1.5 million schools and over 50,000 higher education institutions (MHRD, 2020). The abrupt closure led to the shutdown and cancellation of classes, examinations, and

internships, compelling educational institutions to swiftly pivot to online learning. While the initial transition posed challenges for educators and students, they quickly adapted to the new normal. The government also implemented rapid measures to ensure the continuity of learning. In response, the central and state governments rolled out different policy initiatives for secondary and higher education that leveraged technology, broadcasting networks, and community resources. These efforts constituted the largest emergency education response in India's history, aiming to minimise learning disruptions and simultaneously advancing the objective of digital education.

However, the impact of these initiatives was complex and uneven across India's diverse educational landscape. While government interventions accelerated digital transformation and pedagogical innovation, they also revealed implementation challenges and struggled to overcome pre-existing educational disparities. This research tries to examine the government initiatives implemented during the pandemic and the effects of COVID-19, both positive and negative impacts on education in India. By understanding these multifaceted effects, stakeholders can develop more effective policy approaches for educational recovery and resilience.

2. Objectives

- I. To identify and analyse the key government initiatives implemented in response to educational disruption during the COVID-19 pandemic in India.
- II. To assess the positive impacts of COVID-19.

III. To examine the negative impacts that persisted despite government initiatives and

IV. To suggest a few recommendations for strengthening government policies and programs to support educational recovery.

3. Database and Methodology

The data and information used for this study are derived exclusively from secondary sources, including reports from national and international agencies concerning the COVID-19 pandemic. Other information for this study has been obtained from reputable websites. Several journals and online resources addressing the impact of COVID-19 on the educational system have also been reviewed. This paper was formulated after analysing information collected from these different sources.

4. Government Initiatives in Response to COVID-19

To address the challenges presented by the COVID-19 pandemic and to ensure the continuity of education, the Government of India introduced a wide range of initiatives. These measures included: the development of digital learning platforms to facilitate online instruction, providing training and resources for teachers, and distributing educational materials to students in remote areas. The Union Government, from March 18, 2020, declared a countrywide lockdown of all educational institutions. The Central Board of Secondary Education (CBSE) and National Institute of Open Schooling (NIOS) issued guidelines for rescheduling Secondary and Higher Secondary Examinations on March 18, 2020. Additional guidelines for conducting the examinations were also issued thereafter. The Union Public Service Commission (UPSC) postponed the interview for the Civil Services Examination, 2019. A Janta curfew was observed on March 22, 2020. Thereafter, a series of lockdowns were implemented from 25 March onwards. The state governments also postponed the Board Examinations owing to COVID-19. Almost all states have taken various measures to ensure the continuity of academic activities. Educational institutes adopted online teaching, and students started learning through popular platforms and social media tools such as WhatsApp, Zoom, Google Meet, Telegram, YouTube Live, and Facebook Live.

The Ministry of Human Resource Development (MHRD) has introduced several flagship initiatives, including online portals and educational channels accessible via Direct to Home TV and radio, to ensure that students can continue learning. The ICT initiative of MHRD (e-Brochure - <https://mhrd.gov.in/ict-initiatives>) serves as a unique platform that consolidates all digital resources for online education. Below is a list of some major digital initiatives implemented by MHRD for both secondary and higher education during the COVID-19 pandemic.

4.1 Secondary education

- **DIKSHA portal** provides a comprehensive set of e-learning resources for students, teachers, and parents, all aligned with educational standards. Launched in May 2020 under the PM e-VIDYA program, it includes video lessons, worksheets, textbooks, and assessments developed by over 250 educators under the supervision of CBSE and NCERT. The app provides offline access to over 80,000 e-books for students in classes 1 to 12 and allows users to access content using QR codes found in their textbooks. The app is available on iOS and the Google Play Store. It has recorded over 5 billion learning sessions and 26 million hours of content usage by March 2021 (Central Square Foundation, 2021). For more details, visit: <https://diksha.gov.in> or <https://seshaqun.gov.in/shaqun>.

- **e-Pathshala** is an e-learning application developed by NCERT, catering to students from classes 1 to 12 across multiple languages. This app includes a wide array of resources such as books, videos, and audio specifically designed for students, educators, and parents, available in three languages: Hindi, Urdu, and English. The NCERT website features a total of 1886 audio files, along with 2000 videos, 696 e-books, and 504 flip books available for different classes. Mobile apps are also accessible. To learn more, visit: <http://epathshala.nic.in> or <http://epathshala.gov.in>.

- **The National Repository of Open Educational Resources (NROER) portal** provides a rich array of resources for students and teachers across multiple languages. This platform offers a range of resources, including books, interactive modules, videos, and a variety of STEM-based games. The content is aligned with the curriculum for classes 1 through 12 and features materials specifically designed for educators. At present, the portal contains a cumulative total of 14527 files, containing 401 collections, 2,779 documents, 1,345 interactive resources, 1,664 audio files, 2,586 images, and 6,153 videos offered in various languages. For further details, visit: <http://nroer.gov.in/welcome>.

Other programs under the PM e-VIDYA include the "One Class, One Channel" program, which expanded the number of dedicated educational TV channels (Swayam Prabha) from 3 to 12, catering to different grade levels. Additionally, the program utilised radio by offering podcasts and programs on All India Radio to reach students without internet or TV access. **Special e-content for visually and hearing-impaired students** was also developed to create accessible materials, ensuring inclusivity for those with disabilities.

4.2 Higher Education

- **SWAYAM:** The Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) platform experienced significant expansion during the pandemic, particularly in the purview of higher education. It serves as a national online education platform offering 1,900

How to cite this article: Atisha Lama Yolmo, Government Initiatives and the Dual Impact of COVID-19 on Indian Education: A Comprehensive Analysis. Int JFood Nutr Sci 2022; 11:24-30.

courses that cater to both, school students (grades 9 to 12) and higher education (undergraduate and postgraduate programs) students across a wide range of subjects, including engineering, humanities, social sciences, law, and management. A distinctive feature of SWAYAM is its integration with conventional education. It allows credit transfer policies, through which students can earn up to 40% of their total credits through SWAYAM courses (previously 20%). Website: <https://swayam.gov.in/>

- **Swayam Prabha** comprises 32 DTH TV channels that broadcast educational content 24/7. These channels are accessible nationwide using a DD Free Dish Set Top Box and antenna. Comprehensive channel schedules and additional details can be found on the portal. The programming covers both school education (grades 9 to 12) and higher education (undergraduate, postgraduate, engineering, vocational courses, and teacher training) in subjects such as arts, science, commerce, performing arts, social sciences, humanities, engineering, technology, law, medicine, and agriculture. Website: <https://swayamprabha.gov.in/>

- **e-PG Pathshala** is specifically created for postgraduate students, offering access to e-books, online courses, and study resources throughout the lockdown period. One of the notable advantages of this platform is that students can utilise these resources without the need for a constant internet connection. Website: <https://epgp.inflibnet.ac.in/>

5. Positive Impacts of COVID-19

5.1 Accelerated Digital Transformation

- **Infrastructure expansion:** The crisis prompted significant investment in digital education infrastructure, with the National Digital Education Architecture (NDEAR) framework established in 2021 to create a unified digital ecosystem (Ministry of Education, 2021).
- **Content development:** Digital educational content creation expanded dramatically with the DIKSHA platform. By March 2021, DIKSHA had recorded over 5 billion learning sessions and 26 million hours of content usage, demonstrating its significant reach (Central Square Foundation, 2021)
- **Technology adoption:** A survey of 10,000 teachers across 29 states found that teacher comfort with digital tools increased from 35% pre-pandemic to 84% by late 2021, representing unprecedented rapid up-skilling (NCERT, 2022).

5.2 Pedagogical Innovation

- **Blended learning approaches:** The crisis normalised blended learning models combining synchronous and asynchronous instruction. Many educational institutions have shifted towards blended learning. Research by the Education Alliance (2021) documented how 35% of surveyed schools had

adopted some form of blended learning model by 2021.

- **Micro learning:** Government initiatives promoted the development of short-format, focused content. DIKSHA's analysis showed higher completion rates (58% vs. 27%) for micro learning modules compared to traditional formats (Central Square Foundation, 2021).
- **Competency-based focus:** Government frameworks increasingly emphasised competency-based approaches rather than syllabus completion, with initial implementation guidelines released aligned with NEP 2020 objectives (CBSE, 2021)

5.3 Policy Reforms and System Resilience

- **Assessment reforms:** Board examination structures were modified, with CBSE implementing a two-term assessment model with greater emphasis on continuous evaluation, marking a significant shift from traditional high-stakes examinations (CBSE, 2021).
- **Administrative digitisation:** Educational administration digitised rapidly, with schools reporting regular use of digital systems for administrative functions compared to pre-pandemic.
- **Regulatory flexibility:** Regulatory bodies demonstrated unprecedented adaptability, with the UGC and AICTE rapidly developing alternative frameworks for course delivery, assessment, and academic calendars (UGC, 2021).

5.4 Expanded Learning Ecosystem

- **Parent engagement:** Programs like early initiatives of Karnataka's 'Makkala Mane' and Odisha's 'Ghare Ghare Arunima' began focusing on building parental capacity to support home learning, reaching approximately 3.5 million families by late 2021 (NCERT, 2021)
- **Community involvement:** The establishment of approximately 6,800 community learning centres across rural India by December 2021 created emerging models of educational delivery involving community resources and volunteers (Pratham Education Foundation, 2021)
- **Public-private partnerships:** Government initiatives began forming partnerships with private sector organisations, with approximately 120 EdTech partnerships established across state initiatives by the end of 2021 (Ministry of Education, 2021).

6. Negative Impacts despite Government Initiatives

6.1 Learning Loss and Implementation Challenges

- **Foundational skills regression:** A study conducted by the Azim Premji Foundation (2021), which included 16,000 children from five states, revealed that 92% of the children lacked at least one specific language skill, and 82% lacked at least one specific

mathematical skill during the period of school closures.

- **Implementation gaps:** A survey by Oxfam India (2020) revealed that while government initiatives created content availability, implementation varied widely, with only 31% of government school teachers reporting receiving adequate training for digital teaching.
- **Reduced instructional time:** Despite various initiatives, total instructional time decreased significantly, with the Annual Status of Education Report (ASER) 2021 finding that children studied for 2-3 hours less per day during school closures compared to pre-pandemic levels (ASER Centre, 2021).

6.2 Widening Digital Divide and Educational Inequalities

- **Access disparities:** Despite expanded content availability, the National Sample Survey (NSS 75th Round) highlighted that only 23.8% of Indian households had internet access when the pandemic began, limiting initiative effectiveness (MOSPI, 2018).
- **Urban-rural divide:** The ASER 2020 Wave 1 survey found stark disparities in government initiative reach, with 24.2% of rural students unable to access any form of educational content compared to 7.5% in urban areas (ASER Centre, 2020). The NSSO data (2021) revealed that only 14.9% of rural households had internet access compared to 42% of urban households.
- **Socio-economic factors:** Research by the Indian Institute for Human Development (2021) found a strong correlation between household income and access to government digital initiatives, with students from the lowest income quintile accessing only 12% of available resources compared to 74% for the highest quintile.

6.3 Increased Dropout Rates and Educational Migration

- **School transitions:** ASER 2021 documented a notable shift from private to government schools, with private school enrollment decreasing by 4.6 percentage points between 2018 and 2021, indicating financial distress (ASER Centre, 2021).
- **Gender disparities:** The National Commission for Protection of Child Rights found that girls faced disproportionate barriers to accessing government educational initiatives, with 41% reporting challenges compared to 27% of boys (NCPCR, 2021).
- **Permanent disengagement:** Early assessments by the Azim Premji Foundation estimated that approximately 6 million students may be at risk of permanently dropping out of the education system by

the end of 2021, despite initial government reengagement efforts (Azim Premji Foundation, 2021)

6.4 Psychosocial Impact and Well-being Concerns

- **Mental health challenges:** A UNICEF (2021) survey found that 14% of children in India reported feeling anxious frequently during the pandemic, with 43% saying they needed psychosocial support.
- **Nutrition impacts:** School closures disrupted mid-day meal schemes serving approximately 118 million children daily. While many states attempted to implement take-home ration distribution, implementation was inconsistent (Ministry of Education, 2021).
- **Protection concerns:** Extended school closures increased vulnerability to child labour and early marriage despite government educational initiatives, with child helplines reporting a 50% increase in distress calls during 2020-21 (Childline India Foundation, 2021).

7. Evaluating Government Response Effectiveness

7.1 Strengths of Government Initiatives: Government responses demonstrated several notable strengths:

- **Rapid deployment:** Existing deficiencies in digital infrastructure greatly limited the effectiveness of initiatives, even with their ambitious implementation.
- **Multi-modal approach:** The combination of digital, broadcast, and community-based approaches represented recognition of India's diverse access realities.
- **Policy alignment:** The initiatives successfully matched emergency response efforts with the long-term reform objectives detailed in NEP 2020.

7.2 Limitations and Challenges

Government initiatives faced significant structural constraints:

- **Infrastructure limitations:** The effectiveness of the initiative was significantly limited by existing gaps in digital infrastructure, even with an ambitious rollout.
- **Capacity building gaps:** Teacher preparation for remote and blended teaching remained inadequate despite training efforts.
- **Monitoring weaknesses:** Systems for tracking student engagement and learning outcomes during initiative implementation were inconsistent.

8. Recommendations

8.1 Strengthening Government Initiatives

- **Infrastructure investment:** Accelerated investment in digital infrastructure in underserved regions, prioritising school connectivity alongside household access.

- Teacher capacity ecosystem: Development of sustainable professional development systems focused on blended teaching competencies.
- Outcome measurement: Enhancement of learning assessment systems to provide real-time feedback on initiative effectiveness.

8.2 Addressing the Digital Divide

- Targeted device programs: Expansion of programs providing affordable devices to disadvantaged students through public-private partnerships.
- Zero-rating educational content: Collaboration with telecommunications providers to make educational websites and applications accessible without data charges.
- Community technology hubs: Establishment of shared access points in underserved communities to support students lacking home connectivity.

8.3 Learning Recovery and Retention

- Foundational skills focus: Emphasising basic literacy and numeracy via enhanced learning initiatives.
- Personalised approaches: Implementation of teaching at the right level, methodologies to address learning gaps.
- Retention strategies: Development of early warning systems to identify and support students at risk of dropping out.

9. Conclusion

The COVID-19 pandemic posed a significant challenge to India's education system, leading to various government initiatives aimed at ensuring learning continuity. These efforts catalysed advancements in technology integration and pedagogical approaches, yet also revealed existing structural inequalities and implementation difficulties.

The varied outcomes of these responses offer crucial insights for educational policy. While the rapid digital transformation is a positive legacy, the considerable learning losses and increasing disparities highlight the need for ongoing support, particularly for vulnerable learners.

As India focuses on educational recovery, it is essential for initiatives to balance innovation with equity, leveraging positive changes while addressing challenges. By integrating lessons from the pandemic, India can build a more resilient and equitable education system that effectively meets 21st-century learning needs.

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