



The Enduring Influence Of COVID-19 On Education: A Review On Examining Learning Patterns Among Students In Indian Universities Till Date

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Abstract: The COVID-19 pandemic, caused by a novel corona virus, has been officially acknowledged global health crisis by the WHO [16]. Its unprecedented rapid spread has led to worldwide lockdowns, profoundly disrupting students' lives and transforming educational practices. This situation has necessitated a shift towards new communication and learning methods, which are becoming standard practice. Educational institutions globally are collaborating to innovate teaching approaches and adapt learning paradigms. This transition presents challenges for both educators and students as they struggle to adjust to these changes. In India, a developing nation, many universities face obstacles in providing adequate training for faculty to modify their teaching methods, while students grapple with the transition from traditional classroom learning to online platforms. The lack of in-person classes during this period has limited students' access to practical experiences and collaborative projects under direct faculty supervision. After two years of virtual learning, the return to physical classrooms brings new obstacles in light of pandemic-related restrictions. This paper aims to review and synthesize the extensive research published on this topic, offering in-depth review of the work conducted thus far.

Keyword: Covid-19, e-learning, education system, classroom teaching, pandemic.

1. INTRODUCTION

Pravat Ku Jena's 2020 [9] research article emphasizes that the COVID-19 pandemic has created both difficulties and prospects for educational institutions. The virus's global impact has compelled education departments worldwide to formulate through plans that address complex issues, minimize class disruptions, and alleviate faculty concerns. Universities and education authorities are reassessing existing policies to identify more effective methods of maintaining educational continuity and reducing staff anxiety. In another article Pravat Ku Jena's 2020 [10] titled "Impact of Pandemic COVID-19 on Education in India," Jena notes that the Indian education sector has been tackling the crisis by adopting an alternative approach and implementing digital solutions to counter the pandemic's challenges.

The COVID-19 crisis has demonstrated the necessity of adaptation and accelerated implementation of previously underutilized technologies in educational institutions. Although remote work isn't a novel concept, the pandemic has transformed perceptions of it. In recent years, progress in information and communication technologies has facilitated an increase in work-from-home arrangements across various organizations, allowing employees more flexibility in managing their schedules and tasks. However, specific information on how these setups affect job performance remains limited. Some researchers have explored the integrates between remote work and productivity using survey-based data, but comprehensive empirical evidence remains limited.

Given India's heterogeneous population, with its varied cultures, religions, and ethnic groups, it is necessary for. conduct a comprehensive evaluation of how the post-pandemic "new normal" affects universities. This study seeks to evaluate the impact on student learning through a methodical analysis of publications from diverse sources, including media outlets, research organizations, and policy specialists. Furthermore, the paper will offer recommendations and emphasize crucial aspects that policymakers should consider when designing and implementing measures to address these effects.

2. RECENT WORKS

The COVID-19 pandemic's impact on education has been extensively studied. Numerous researchers have examined the effects of e-learning on students and faculty, given the challenges and fluctuations in their lives during this period. An analysis of pertinent research reveals several key findings:

The growing importance of web-based education systems in universities, noting their rapid adoption due to decreasing implementation costs emphasized by Yengin et al. (2011) [17]. Toro & Joshi (2013) [8] highlighted how e-learning allows students to save time and effort, particularly those living far from their registered universities. Samir et al. (2014) [13] observed that e-learning is transforming the entire education system and becoming the preferred academic approach.

Gaebal et al. (2014) [6] pointed out that e-learning benefits students in remote areas with poor communication infrastructure, enabling them to pursue degrees from global institutions online.

Aung & Khaing (2015) [5] compared e-learning challenges in developed and developing countries, finding that the latter face more obstacles such as inadequate internet connectivity, limited familiarity with advanced technologies, and weaker content development.

Somayeh et al. (2016) [15] acknowledged that while e-learning can improve educational quality and meet learners' needs, it has limitations. Certain domains requiring practical work aren't well supported by heavy reliance on websites. Additionally, e-learning lacks personal interaction among students and between students and faculty.

Abdullah et al. (2019), [1] Altawaty et al. (2020), [4] and Selim (2007) [14] explored how Information and Communication Technologies (ICTs) can enhance teaching, learning, innovation, and creativity in educational organizations. They viewed ICTs as training tools to foster creative and innovative activities.

Aboagye et al. (2020) [2] defined e-learning as a formal learning system using electronic resources, both inside and outside classrooms, made possible by the internet's widespread availability. As COVID-19 spread rapidly, transitioning from traditional teaching methods to e-learning emerged as the most efficient method to prevent virus transmission in educational institutions. E-learning has reduced the effort and expenses associated with traditional learning methods. It simplifies attendance tracking, lecture preparation, and material distribution, which are time-consuming in traditional settings. Students can access materials easily, becoming self-learners with flexible timing options. However, e-learning has drawbacks. It lacks practical, hands-on experience, potentially diminishing students' applied skills. The absence of face-to-face interaction raises questions about its reliability. Technology misuse is another significant challenge in online education. Lizcano et al. (2020) [7] noted that while e-learning was necessary, its benefits to students were limited. Aljawarneh et al. (2020) [3] highlighted how ICT in education enables knowledge extraction and data generation for improved learning. They defined e-learning broadly, including web-based, digital, interactive, and computer-assisted learning. They also noted that video content and advanced applications in e-learning remain challenging for faculty in developing countries, even at higher education levels.

Pravat Ku Jena (2020 b) [11] reported that during lockdowns, state governments ensured educational continuity through online classes, offering opportunities to develop new professional skills and knowledge. Aboagaye et al. (2020) [2] found that e-learning implementation was hindered by lack of preparation and experience among faculty and students.

Radha et al. (2020) [12] observed that students who were already using online methods for self-study benefited more compared to those relying on traditional learning methods. Various digital platforms were implemented to support education during the pandemic.

The Diksha portal offered 80,000 e-books for grades 1-12 in multiple languages, created by over 250 CBSE teachers. E-Pathshala, an NCERT app, provided multimedia resources up to senior secondary level in various languages. The National Repository of Open Educational Resources offered modules, videos, and STEM-based games for grades 1-12. For higher education, the SWAYAM portal provided undergraduate and postgraduate courses across all subjects, uniquely integrating with traditional educational institutions.

This literature review offers crucial insights into COVID-19's impact on education, particularly regarding distance learning. It underscores the difficulties faced by students. It highlights the importance of universities addressing these challenges and acting offer appropriate support during disruptive periods.

3. PROS & CONS

The COVID-19 crisis prompted a worldwide transition from in-person to remote education. This shift incorporated various online teaching strategies, including synchronous video conferences, asynchronous communication methods, and an array of digital tools. However, this abrupt change presented several obstacles, such as access to online platforms, proficiency of teachers and students in remote learning, and meeting specific field requirements.

Challenges like limited internet connectivity, insufficient ICT equipment, and unfamiliarity with online tools affected the quality of learning, particularly in countries with fewer resources. The success of this shift relied heavily on its efficiency on existing technological infrastructure, the flexibility of educators, and students' adaptability to the new learning environment. These changes significantly impacted the lives of both students and faculty members. The following discussion will explore the main advantages and disadvantages of online education, presented as pros and cons.

Pros:

- While online education isn't a new concept globally, its adoption in developing countries like India was limited before the pandemic. Only a few universities offered online programs, with a restricted range of courses.
- The COVID-19 crisis compelled universities to rapidly embrace and expand online learning. As a result, institutions have now widely implemented this change, significantly broadening the scope of online executive programs.
- Both faculty and students have adapted to this shift, becoming comfortable with remote learning methods. This transition allows students to take part in classes from various locations worldwide, offering flexibility in terms of time and place. Additionally, it enables faculty to connect with a broader student base.
- Online education offers cost benefits by eliminating expenses like transportation and meals. It's environmentally friendly, creating a paperless learning environment with digital course materials.
- Student attendance has improved as classes can be accessed from any location, including home. The online format supports diverse learning styles through various tools such as videos, PDFs, audio files, and podcasts.
- The pandemic has necessitated a reassessment of educational policies and practices.
- Researchers have investigated strategies to counter COVID-19's negative effects on education, including targeted support for vulnerable students, adaptable assessment methods, and hybrid learning approaches.
- The literature emphasizes the importance of thorough planning to tackle the pandemic's long-term effects on education systems. It's important to note that research on COVID-19's educational impact is ongoing, with new data and insights continually emerging.

Cons:

- Online learning has notable drawbacks. Students are more easily distracted by social media.
- Teacher-student interaction is compromised, with reduced student engagement in doubt-solving and classroom participation.
- Technical issues, such as inconsistent internet connections, particularly affect students in smaller cities and rural areas.
- The increased screen time associated with online learning has led to concerns about physical health, including postural problems and eye strain.
- The lack of peer interaction has limited social learning opportunities and potentially increased academic dishonesty.
- Practical and laboratory experiences have been severely limited. Extended school closures have resulted in significant learning losses, particularly in foundational subjects and among disadvantaged students.
- The shift in educational practices has also negatively impacted students' mental health, with increased rates of anxiety, depression, and stress reported.
- Students from low-income backgrounds, marginalized communities, and those with disabilities have faced greater challenges in accessing quality education during this period.

4. CONCLUSION

The COVID-19 pandemic has profoundly affected India's education sector, impacting both universities and schools. This situation presents both challenges and opportunities, with change being inevitable. Indian authorities are working tirelessly to develop new policies and teaching methods to enable a smooth transition. As regions reopen, universities are adapting. The literature review suggests three potential scenarios for upcoming academic sessions:

- 1) A shift in student attitudes, study habits, and routines
- 2) Universities exploring hybrid online and offline learning models; and
- 3) New business opportunities emerging from government policies, including the "Atma Nirbhar" (self-reliant) initiative.

The shift to online learning has resulted in various challenges, including learning difficulties, social isolation, strained student-faculty relationships, and decreased academic performance. Students reported studying more at home but experiencing poorer mental health and weaker relationships with faculty and peers. The sudden transition to online learning and reduced peer and faculty interaction negatively impacted students' learning experiences and overall performance. Students' personal circumstances were significantly affected, with increased workloads, difficulties adapting to home study, and unsuitable learning environments leading to feelings of overwhelm. Limited internet access and lack of quiet study spaces posed additional challenges, particularly in certain regions. Financial issues, job losses, and career uncertainties further affected student well-being. School closures and lack of face-to-face peer interactions contributed to negative emotions such as boredom and anxiety.

Students' socio-demographic characteristics influenced their experiences during the pandemic. Compared to their male counterparts, female students reported heavier workloads and greater anxiety about their academic and professional futures. Undergraduates encountered more significant challenges related to workload and well-being than postgraduates. Financial concerns were more prevalent among part-time students, while full-time students primarily worried about academic matters. The students' chosen field of study also affected their workload and overall well-being. Those with care giving responsibilities, particularly childcare, faced additional hurdles during this period.

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