



Challenges of Online Learning for Education in Rural and Remote Areas

Dr. Aprajita Choubey

Abstract

Educational institutions across India have been shut down since mid-March 2020 because of the COVID-19 pandemic. Schools and colleges located in rural and remote parts of India are facing exceptional difficulties as a result of these closures. In this context, the current paper examined the obstacles of online education in rural settings for all parties involved. This qualitative study involved two students, two parents, and two teachers from rural areas. The distinctive aspect of this research is that it evaluated the challenges of online learning from the viewpoints of students, teachers, and parents. The findings indicate that online education is fraught with difficulties due to various factors such as insufficient technological devices, inadequate network connectivity, and electricity issues. A significant drawback for teachers is their lack of experience with online instruction. Other obstacles include the literacy level of parents and the interest of students. There has been a notable amount of stress experienced by parents, students, and teachers due to the shift from conventional to online education.

Keywords: COVID-19, Online Learning, Rural Areas, Unprecedented Challenges.

Introduction

The worldwide spread of the COVID-19 pandemic has impacted nearly every country and has led to a range of public health measures. The pandemic necessitated the closure of various organizations globally. The shutdown of educational institutions was a notable physical distancing action taken by governments in several countries to limit the transmission of this infectious disease. Educational apps and online platforms have been employed by schools and educators to maintain communication with students and minimize disruptions in learning. Online education emerged as a component of the Indian education landscape in the early 2000s as a form of distance learning. This style of education necessitates access to digital gadgets and reliable Internet service. Tools such as video conferencing, PDFs, educational videos, and audio recordings are utilized in this approach. Applications like Zoom,



Google Meet, and Jio Meet are commonly used for video conferencing, while WhatsApp and Telegram facilitate the sharing of learning materials with students.

During the lockdown, all promotional examinations for school students in Odisha were halted, and students were advanced to the next grade based on their term assessments. To prevent any delays in academic progress, the new academic year commenced in April 2020. The School and Mass Education Department of the Odisha government implemented an online teaching approach to navigate the educational process. This shift posed challenges for rural students who are accustomed to a traditional classroom environment, where a teacher is physically available to guide and oversee their learning. Online education represents a novel experience for students in rural regions.

Problem

Following the government's decision to resume classes and engage students, traditional education shifted abruptly to an online format. This transition from conventional to digital education transformed the educational landscape, and the long-term implications are still unclear. Educators and learners face the challenge of adapting to this new mode of teaching and learning. Regardless of whether it is distance or virtual education, teachers must strive to connect with nearly all their students. Prior to the pandemic, online learning existed, but not all educators were well-versed in the necessary technology. Confined to their homes and required to rapidly acquire new technological skills, many teachers went through one of the most stressful experiences of recent times. Students, in conditions of social isolation and seclusion, had to cultivate new skills essential for e-learning.

Furthermore, online education is likely to exacerbate the educational divide between children from low-income and high-income families. Students living below the poverty line face environments that are not suitable for online learning. The primary obstacles to the shift to online education in India include a lack of sufficient digital devices for students and inadequate internet access at home due to financial constraints. Children from disadvantaged households are finding it challenging to complete online assignments due to an unsuitable home environment. Recently, it was reported that a father took his own life because he was unable to provide smartphones for his children's education. In another instance, a family had to sell their only source of income, a cow, to purchase a smartphone, which garnered significant attention. Distressed over not having a smartphone for online classes, a 17-



year-old girl in Punjab ended her life. Students, isolated from their schoolmates, often find online classes tedious. The unforeseen disruptions to education caused by COVID-19 highlight the importance of studying and documenting the significant changes in teaching methods and the responsibilities of educators.

Rationale

The essence of online learning lies in harnessing the power of IT to create expanded learning opportunities for everyone. The Government of India has initiated the National Mission on Education through ICT (NMEICT) to make online education accessible to all. Numerous initiatives have been implemented to advance digital education, including SWAYAM, SWAYAM Prabha, ShodhGanga INFLIBNET, the National Digital Library, and the National Academic Depository, all overseen by the Ministry of Human Resources Development. In addition to these platforms, the MHRD has introduced the Diksha App, various channels, and many other initiatives aimed at enhancing online learning throughout India. As there were no viable alternatives, both central and state governments mandated online learning during the lockdown to continue the educational process.

This study is grounded in the belief that those facing challenges can devise effective solutions. To explore this, participants including rural students, their parents, and teachers who encountered difficulties with online teaching and learning were involved. To the researchers' knowledge, there have been no previous studies focusing on the challenges faced by online learners in rural settings after the COVID-19 school closures. This research examines the effects of online learning resulting from COVID-19-induced school closures on teachers, students, and parents residing in rural areas of the Dhenkanal district in Odisha.

Consequently, the following research questions were formulated:

What adjustments did the teacher experience, and what challenges did he/she encounter in delivering online instruction to students?

What obstacles do students face during online instruction?

How did parents view the online teaching experience, and what challenges did they face?

These research questions fill significant gaps in the existing literature by incorporating the perspectives of key stakeholders, namely students, teachers, and parents.



Objectives

The aim of this research was to highlight the experiences of school educators, learners, and parents transitioning to online instruction during the COVID-19 lockdown. The research seeks to comprehend the obstacles encountered by teachers, students, and parents in adopting the online teaching and learning process following the closure of schools due to COVID-19.

Review of Literature

The pandemic has impacted people's lives in various aspects, including work, education, communication, finances, and health. To protect public health, governments around the globe suspended educational institutions. This sudden and unprecedented disruption to social life and education drastically changed the roles of many educators in numerous ways. Research examining the main challenges and factors affecting the use of e-learning systems during the COVID-19 pandemic identified technical issues as one of the crucial elements influencing e-learning practices. A study conducted in South Africa indicated that numerous learners in rural areas are excluded from the online teaching-learning process due to a lack of digital devices for internet connectivity, learning management systems, and software. By utilizing both qualitative and quantitative methods, a study explored the professional experiences of a secondary school teacher who continued to instruct students online in rural Alaska during COVID-19. The findings revealed that the teacher faced increased workload and believed online education should be designed to be inclusive and well-considered. In developing nations, the e-learning process can be obstructed by technological literacy, educational background, and socio-economic issues affecting the population. In Southeast Asia, a significant portion of the population lacks electronic devices and internet access. Even among those with internet availability, they often face issues related to inconsistent internet speeds across different regions. Urban residents generally benefit from much faster internet compared to individuals residing in less developed areas. Access to the internet and digital devices remains a critical equity concern, particularly in rural communities. Research conducted in Nepal found that many students faced disruptions during online classes due to power outages (63.2%) and internet issues (63.6%). Similarly, about half of the teachers experienced challenges with online instruction because of electricity outages (42.3%) and internet problems (48.1%). Reports of children sitting in trees or near high places and



riverbanks to attend virtual classes have been widely shared across electronic and social media platforms in Odisha.

Methodology

Design

This qualitative study, which is descriptive and explanatory in nature, examines how students, teachers, and parents perceive the transition from traditional classroom instruction to online teaching. While qualitative research has its limitations [22], its strength lies in incorporating the viewpoints of all key participants: students, teachers, and parents. The research delved into the perspectives of teachers, the attitudes and opinions of students, and the concerns of parents through various methods of data collection.

Data was gathered through direct and participatory observations in their environments, semi-structured interviews, open-ended questions, and phone conversations. The researchers possessed a solid understanding of the teachers' workload and working conditions. They were also aware of the challenges faced by rural parents and students regarding technological expertise before the shift to online education. Hence, they remained attentive throughout the study to investigate how the closure of schools and the move to online instruction were perceived by the teachers, students, and parents involved.

Participants

The study included two teachers, one male and one female, two students, one boy and one girl, and two guardians, one male and one female. All participants were from a rural government school located in the Aurangabad district of Bihar. The teachers had over fifteen years of experience at their respective schools. Due to their long tenure at the institution, they possessed extensive knowledge about the students and the community surrounding the school.

Data Collection

Descriptive information regarding the experiences of teachers, perceptions of students, and attitudes and challenges faced by parents was collected over a two-week period from various sources. Semi-structured interviews with both open and closed questions, along with daily discussions on the subject through social media, were conducted and documented. Interviews and discussions concentrated on



the overall experiences of respondents regarding the effectiveness of online learning, the obstacles and challenges of online education, and recommendations from all participants regarding its future implementation as an alternative model. Open-ended questions were designed with an emphasis on content, clarity, and sequence. All discussions were conducted through personal interviews while maintaining physical distance, via phone calls, and through WhatsApp chats. Pseudonyms were employed to protect the participants' identities.

Questions for the teachers included:

What challenges do you encounter due to the school closure and the shift from classroom learning to online learning?

How did you engage your students, and what is your view on student participation?

Questions for the students included:

What has been your experience with online learning? Do you consider online learning to be interesting?

Have you encountered any difficulties with online learning?

Questions for the parents included:

What challenges do you face as a result of the school closure and the transition from classroom education to online education?

How do you perceive the role of teachers in supporting you during online education?

Results

When addressing the first question, Teacher X remarked, "Taking online classes is quite challenging due to limited or no network connectivity. There are times when I have to step outside my home to find a better signal. One day, while I was conducting a class on my rooftop, a group of monkeys unexpectedly jumped from my neighbor's roof to mine, forcing me to halt the class and flee. Online learning is more effective in urban areas where network issues are absent. Not all students benefit from online education, as they are accustomed to traditional methods. The students at my school require ongoing support and guidance from teachers, as their parents cannot assist them. I feel regretful and stressed, knowing that students are not receiving fair treatment in this system."



Teacher Y also voiced her concerns about the challenges related to online learning. "I acquired a smartphone after being directed by the authorities to hold online classes. It took me several days to familiarize myself with the internet application. Following the authority's directive, we teachers created a WhatsApp group with the students. we could only add a limited number of students because many did not possess smartphones. All the teachers from my school went door-to-door to distribute textbooks and other educational materials. Most of the families consist of daily wage workers, auto-rickshaw drivers, and vegetable sellers, who are engaged in various jobs. They cannot afford to buy smartphones, and issues related to internet connectivity and data usages are also prevalent."

Both teachers shared similar concerns about engaging and involving students. Their opinions regarding student participation echo one another. "Even though there are roughly forty students in a class, only eight to ten of them raise questions and submit their assignments. Some lack devices, others experience poor connectivity, and some do not have guardians who can guide them. We have informed the students and their guardians about the Diksha channel and encouraged them to watch it according to the schedule. We have been unable to visit their homes regularly due to concerns about contamination."

One guardian (male) mentioned, "I work as an auto rickshaw driver. I have a mobile phone, but it stays with me all day, as people call me to book rides to the hospital or station. Due to the lockdown, my income has drastically reduced or even disappeared entirely. I'm not spending any money on my children's education. The government is supplying everything necessary, including uniforms, textbooks, mid-day meals, and even a bicycle for my child's education. I wish I could purchase a new phone, but I cannot."

"I am a tailor, and my husband runs a small tea and biscuit shop on the roadside. We have two kids, one attending college and the other in high school. We own a smartphone which the older child uses for online classes. Unfortunately, we cannot afford another phone. The younger child struggles to attend online classes because the elder sibling rarely shares the phone with him. The younger one can only access the audio-video clips sent by the teachers via the WhatsApp group."

Both the students and their guardians expressed appreciation for the teachers' efforts during the lockdown. In response to a second question, one guardian stated, "The teachers visited our house to



distribute books for the new session. They advised me to purchase a mobile phone or a computer with internet access. They also informed us about the Diksha channel available on television. However, my child cannot fully participate in the channel's classes due to frequent power outages. The teachers do provide support when my child reaches out for clarification. Still, I believe this solution doesn't work for all students."

To gauge the reactions of students who have smartphones and computers with internet access, the researchers noted the comments of two students about their experiences with online education. Both students indicated that they own smartphones, but the network is not always reliable. Although they find online learning quite enjoyable, frequent disruptions lead to frustration. "Frequent power outages are a persistent problem in our region. Sometimes, I lose motivation to study alone. In a school setting, learning with friends is much more engaging. It's also easier to clear doubts since we can ask our peers and teachers whenever we have trouble grasping concepts."

Discussion

This research was conducted in 2020 in the Dhenkanal district of Odisha, highlighting the difficulties associated with online education in rural regions. Many schools still lack the infrastructure necessary for online classes, and teachers are in the process of receiving training on how to facilitate such classes. Overall, the advantages of conducting online classes are limited in rural and remote areas. Although telecommunications and internet access exist in some grassroots areas of India, strong network and internet services are not available everywhere. Consequently, students miss opportunities to participate in classes or complete examinations. The abrupt closure of educational institutions due to lockdowns left students feeling indifferent and distracted, as they no longer had regular classes or tutoring. The absence of interaction between teachers and students, as well as among students themselves, combined with traditional methods of teaching, has negatively impacted the quality of education provided to the students. Addressing doubts became increasingly challenging in an online format.

A tumultuous home environment, household conflicts, and food insecurity have also hindered students' mental well-being, making it difficult for them to study. Numerous households in rural regions exist under the poverty threshold. Therefore, when securing adequate meals is a struggle for these families, they often cannot afford the necessary technology for their children's education. With most parents



lacking education themselves, they encounter significant challenges in guiding their children. This inability to provide basic necessities for online education causes them stress and despair. The obstacles associated with online education identified in this research support the findings of previous studies by Almaiah (2020), Dube (2020), Babu and Reddy (2015), McLaren (2003), Azano and Stewart (2015), and Subedi et al. (2020).

After students, teachers in rural schools are also severely impacted. The educators and pupils in these schools are accustomed to traditional teaching methods. This research revealed that teachers lacked adequate knowledge of online classes and had not received any training. Many of the teachers, being middle-aged or older, are often unfamiliar with conducting online classes using smart phones or laptops, frequently relying on their children or grandchildren for assistance. The transition to online education has led to declines in teachers' self-esteem, teaching productivity, and motivation levels. In addition to their teaching responsibilities, these educators also dealt with various other tasks like distributing books, facilitating student re-admission, and caring for quarantine centers set up in their schools. Teachers expressed that these challenges caused them considerable stress. The results of this study align with earlier research by Baired (2020), Fagell (2020), and Kaden (2020).

Conclusion & Recommendations

Prior to the COVID-19 pandemic and subsequent lockdown, the education system in rural India lacked quality, even after various welfare initiatives were put in place. The research revealed that while online learning appeared to be a feasible option during the COVID-19 era, several challenges hindered the effective use of technology. For school children, online education presents difficulties due to issues such as limited internet access, insufficient resources to purchase necessary devices and data, power shortages, lack of technical know-how, an unsuitable home environment, and absence of direct interaction between students and teachers. Although the study faces constraints like a limited sample size, it has comprehensively addressed the matter by involving all relevant stakeholders.

The study's outcomes are crucial for enhancing the implementation of online education. It is recommended that adequate training be provided for both students and teachers. Support and professional development for teachers are essential for recovery from this crisis and for fostering sustainable educational practices in the future. Students from economically disadvantaged



backgrounds should be provided with smart phones and other essential resources. Furthermore, if feasible, schools and educational institutions should resume operations with strict adherence to social distancing guidelines and appropriate precautions to ensure the safety of all individuals involved.

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