

# Surviving the COVID-19 Pandemic: Challenges and Adaptations in Online Learning for Students with Learning Disabilities in English Language Education and Mathematics in Nigeria

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## **Abstract**

*The COVID-19 pandemic, which necessitated a rapid transition to online learning, considerably impacted education systems worldwide, particularly for students with learning disabilities. This study examines the challenges and adaptations in online learning for students with learning disabilities in English Language Education and Mathematics in Nigeria. It explores the digital divide, technological barriers, and inadequate pedagogical approaches that compounded difficulties for these students. Despite these challenges, the implementation of hybrid learning models, targeted teacher training, and resource distribution showcased resilience and innovation in addressing these barriers. However, the study emphasizes the need for more comprehensive and sustainable strategies to support inclusive education. Recommendations include improving digital infrastructure, enhancing teacher training, developing inclusive learning materials, enforcing inclusive education policies, and fostering public-private partnerships to bridge the digital divide. These measures are crucial for ensuring that all students, regardless of their learning challenges, have equitable access to quality education during crises like the COVID-19 pandemic.*

**Keywords:** *Learning Disabilities, Online Learning, Digital Divide, Inclusive Education, Hybrid Learning Model, and Teacher Training.*

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## **1.0 Introduction**

The global outbreak of the COVID-19 pandemic, which began in December 2019 in Wuhan, China, swiftly spread across the world, impacting nearly every country and territory. In response, governments implemented a range of public health measures, including handwashing, wearing face masks, physical distancing, and avoiding mass gatherings. These measures were essential to controlling the transmission of the virus, leading to widespread lockdowns and stay-at-home orders (Sintema, 2020). However, these necessary precautions brought about significant disruptions to everyday life, particularly in the education sector.

In Nigeria, as in many other countries, the closure of schools, training institutes, and higher education facilities led to a dramatic shift in how education was delivered. Educators, students, and parents were suddenly thrust into a new paradigm where online learning became the primary means of continuing education. This shift, while crucial for maintaining educational continuity during the pandemic, posed significant challenges. The transition from traditional face-to-face learning to online platforms required rapid adaptation by both educators and students, many of

whom were unprepared for such a change. The concept of "Education in Emergency" became the norm, as schools and universities across Nigeria scrambled to adopt and implement online learning solutions.

E-learning tools played a vital role in this new educational landscape, enabling schools and universities to facilitate student learning despite the physical closure of institutions (Subedi, Nayaju, Subedi, Shah & Shah, 2020). However, the effectiveness of these tools depended heavily on the readiness and adaptability of both educators and learners. While some students were able to quickly adjust to the new learning environment, others, particularly those with specific learning disabilities, faced significant obstacles. The lack of a one-size-fits-all pedagogy for online learning further complicated the situation, as different subjects and age groups required different approaches (Doucet, Mathieu & McKay, 2020). For students with specific learning disabilities, particularly in core subjects like English language education and mathematics, the transition to online learning was particularly challenging.

In Nigeria, these challenges were exacerbated by existing inequalities in access to technology and the internet, which further marginalized students with learning disabilities. The shift to online learning highlighted the urgent need for inclusive education strategies that could address the diverse needs of all students. While online learning offered some benefits, such as increased accessibility for physically challenged students (Basilaia & Kvavadze, 2020), it also required a level of technological proficiency and self-discipline that many students with learning disabilities struggled to achieve. The psychological and emotional toll of the pandemic, coupled with the disruption of routine and direct support, made it even more difficult for these students to engage meaningfully in their studies (Evans & Petrie, 2020).

This study aims to investigate the challenges and adaptations in online learning for students with learning disabilities in Nigeria, with a focus on English language education and mathematics. By exploring the specific difficulties these students faced and the strategies employed to support their learning, this research seeks to provide valuable insights into how educational systems can better accommodate the needs of students with learning disabilities during crises like the COVID-19 pandemic. The findings will contribute to the broader conversation on inclusive education and offer recommendations for improving online learning practices in Nigeria, ensuring that all students have the opportunity to succeed, regardless of their individual challenges.

## **2.0 Literature Review**

The studies conducted by various scholars, such as Abubakar, Kabara, and Enriquez (2022), Azubuike, Adegboye, and Quadri (2021), Jimola and Ofodu (2021), and others, provide a comprehensive understanding of the impact of the COVID-19 pandemic on education in Nigeria, particularly the transition to online and hybrid learning environments. Each study highlights different aspects of this transition, from student preferences and the digital divide to the effectiveness of remote learning strategies and the readiness of educational institutions.

Abubakar, Kabara, and Enriquez (2022) focused on examining the preferences of Nigerian students in the post-COVID-19 era, particularly in terms of learning modes. Their study, which surveyed 153 students from various departments at a Nigerian university, revealed a strong preference for hybrid learning, with 69% of students favoring a combination of online and offline learning activities. While 51% were inclined toward online learning, only 19% wished to continue exclusively with online education after the pandemic, and a small minority (12%) preferred traditional face-to-face learning. This study's findings offer critical insights for policymakers, particularly the Nigerian Ministry of Education, in designing policies and guidelines that align

with student preferences, promoting a blended learning approach that integrates the benefits of both online and in-person education.

In contrast, Azubuike, Adegboye, and Quadri (2021) explored the digital divide in accessing remote learning during the pandemic. Their study, which sampled 557 students and 626 parents across Nigeria, underscored the significant disparities in access to remote learning, particularly between students from different socioeconomic backgrounds and between those in public and private schools. The research highlighted the challenges faced by students from lower-income families and those attending government schools, who had limited access to digital tools and online learning opportunities. Furthermore, the study established a significant association between parental education levels and their ability to support their children's remote learning, emphasizing the role of socioeconomic factors in exacerbating the digital divide. This study is crucial in understanding the broader implications of online learning and the need for targeted interventions to bridge these gaps.

Jimola and Ofodu (2021) examined how the educational system in Ekiti State, Nigeria, adapted to the challenges posed by the COVID-19 pandemic, focusing on the effectiveness of various learning channels. Their study found that students employed multiple learning channels, including television, radio programs, virtual learning, and private teaching, to continue their education during the pandemic. Interestingly, the study revealed that students did not have a strong preference for specific learning styles but rather adapted to the available channels, demonstrating flexibility in their learning approaches. The study recommended the implementation of policies that promote diverse and alternative learning strategies, which could mitigate the impact of future disruptions. This finding is particularly relevant in understanding the adaptability of students and the need for education systems to cater to different learning styles and preferences.

Abanikannda (2022) investigated the role of ICT in meeting the challenges of e-learning during the pandemic. The study, which involved 300 students and lecturers from three institutions in southwestern Nigeria, found that e-learning had a positive impact on the Nigerian education system during the pandemic. However, significant challenges were identified, including poor technical infrastructure, high costs of ICT equipment, and a lack of computer literacy among students and lecturers. The study also identified the most commonly used e-learning platforms, such as Learning Management Systems (LMS), Google Classroom, Zoom, and Skype. These findings underscore the importance of addressing the infrastructural and technical challenges that hinder the effective implementation of e-learning in Nigeria.

Ajibo and Ene (2023) extended this discussion by examining the impact of COVID-19 on university education in Nigeria, particularly the potential of online education in the post-pandemic era. Through in-depth interviews with 15 participants, including university lecturers, students, and school social workers, the study found that the pandemic severely disrupted university education. The study highlighted the challenges of transitioning to online education, such as the lack of access to necessary devices, unreliable internet services, and poor ICT knowledge among lecturers. The research concluded that online education could offer a solution to the frequent interruptions in university education in Nigeria, provided that the government allocates sufficient resources to create an enabling environment for its success.

Ebele and Nisa (2023) focused on the impact of the pandemic on secondary education in Anambra State, Nigeria, exploring the disruptions, challenges, and adaptive strategies employed by students, teachers, and parents. The study, which involved focus group discussions with 25 participants, found significant gaps in teacher preparedness, infrastructure, and technological support, which hampered the effective implementation of remote learning. Despite these challenges, the study

noted the resilience and innovation displayed by educators in adapting to the new learning environment. The research underscores the importance of government and institutional support in addressing these challenges and shaping future education policies.

Finally, Dansabo, Abdullahi, and Mohammed (2023) assessed the effects of the pandemic on the education dynamics in Government Secondary School (GSS) Dundaye, Sokoto State. Their mixed-method study revealed that the pandemic had a predominantly negative impact on the school, with visible declines in academic performance and increased dropout rates, as some students abandoned schooling due to fear of kidnapping and other socio-economic pressures. The study highlights the broader social implications of the pandemic on education, particularly in regions facing additional security challenges.

Eli-Chukwu et al. (2023) evaluated the readiness of lecturers for e-learning in Nigerian universities, revealing significant gaps in resource availability, infrastructure, and the necessary skills for effective e-learning. The study, which involved 324 lecturers from federal, state, and private universities, found that Nigerian universities were largely unprepared for the shift to e-learning, which was exacerbated by unreliable internet access and a lack of e-learning pedagogy. This study calls attention to the critical need for improving the e-learning infrastructure and training for educators to ensure the sustainability of online education in the future.

## **2.1 Theoretical Framework**

The Social Reconstruction Theory, as first propounded by Pier et al. (2021), offers a compelling framework for examining the challenges and adaptations in online learning for students with specific learning disabilities in Nigeria during the COVID-19 pandemic. This theory advocates for a co-created pedagogy between teachers and students, emphasizing the need for educational practices that promote social justice and challenge existing inequalities. In the context of the pandemic, these principles are particularly relevant as students with learning disabilities often face additional barriers that traditional educational systems exacerbate.

The critical pedagogy aspect of this theory, which Muhammad & Uddin (2019) discussed, further highlights the importance of student engagement and the prioritization of their areas of interest over rigid, teacher-centered curricula. This approach is vital for students with learning disabilities, who may struggle more with conventional teaching methods that emphasize memorization and standardized test scores. By focusing on student-centered learning, educators can create more inclusive environments that cater to the diverse needs of these students, helping them to realize their full potential.

However, the theory is not without its criticisms. Some argue that critical pedagogy can become counterproductive if it allows teachers to impose their cultural biases on students, potentially stifling the very liberation of thought it seeks to promote. In the context of the Nigerian education system during the pandemic, this criticism raises important questions about the potential for educators to unintentionally reinforce inequalities through well-meaning but misguided practices. When relating this theory to the challenges and adaptations in online learning during the COVID-19 pandemic, it becomes clear that a balance must be struck. The co-creation of pedagogy, as advocated by Social Reconstruction Theory, must be carefully managed to ensure that it truly empowers students, particularly those with specific learning disabilities, rather than perpetuating existing biases and inequalities. This approach aligns with the study "Surviving the COVID-19 Pandemic: Challenges and Adaptations in Online Learning for Students with Specific Learning Disabilities in English Language Education and Mathematics in Nigeria," which seeks to explore

how these students have navigated the complex landscape of online learning during a time of unprecedented educational disruption.

## **2.2 Challenges**

One of the most significant challenges identified is the digital divide, which exacerbates the difficulties faced by students with learning disabilities. Many students lacked access to essential digital tools, such as laptops, tablets, and reliable internet connections, making it difficult to participate in online learning. This issue was particularly pronounced in rural areas, where infrastructure is often inadequate. Additionally, the lack of teacher preparedness to effectively deliver online instruction tailored to the needs of students with specific learning disabilities further hindered their learning experiences. Teachers often struggled to modify their teaching methods to accommodate different learning styles, particularly in subjects like English and Mathematics, which require more interactive and personalized instruction.

## **2.3 Adaptations**

In response to these challenges, several adaptations were implemented to support students with specific learning disabilities. Educators and policymakers adopted hybrid learning models that combined online and offline resources to ensure that students could access learning materials through various means, such as radio, television, and printed materials. This approach helped mitigate some of the accessibility issues, particularly for those with limited digital access. Moreover, there was a growing emphasis on teacher training to enhance their ability to support students with specific learning disabilities in an online environment. This included professional development programs focused on using digital tools effectively and adapting instructional strategies to meet diverse learning needs. Additionally, partnerships with telecommunication companies and NGOs helped provide necessary technological resources to disadvantaged students, thereby improving their participation in online learning.

## **3.0 Methodology**

The research design used in this study was a mixed-methods research design to explore the difficulties and accommodations of learning online among students with learning disabilities in Nigeria during the COVID-19 pandemic. The data were collected using structured surveys given to teachers, students, and parents in a sample of secondary schools and semi-structured interviews with educators involved in teaching English Language Education and Mathematics. The descriptive statistics were applied to the quantitative data to identify the prevalence of technological barriers, the indicators of the digital divide and access to pedagogical resources, and the thematic analysis was used with the qualitative data to identify personal experience and coping strategies. The validity of triangulation was also conducted by studying policy documents and government reports on education during the pandemic. This research methodology offered a coherent understanding of the system-wide problems and remedies of inclusive online learning.

## **4.0 Results**

Results indicated that students with learning disabilities were greatly disadvantaged by online learning during the pandemic, largely because of poor digital connectivity, unstable internet access and limited access to assistive technologies. Most households could not afford to have functional devices or regular internet packages to continue closing the digital divide between students with specific learning disabilities and their peers. Educators also said they found it difficult to redesign

classic learning strategies to online platforms, especially providing one-on-one assistance in English Language and Mathematics. This was worsened by the lack of special purpose digital learning content, which led to low involvement, ineffective interaction, and underperformance (grades) in many students.

These issues have also allowed for the identification of some areas of resilience and innovation in the education system. The introduction of hybrid learning formats, in which online classes were supplemented by regular face-to-face guidance, has been especially successful in filling a few of the gaps. Educators who underwent specialized digital pedagogy training showed better ability to reach students with learning disabilities by delivering content more simply, using interactive learning tools, and by differentiating instructions- many of whom were private schools educators.

## **5.0 Discussion**

The findings provided in this research point to the fact that the COVID-19 pandemic has brought a staggering experience to students with specific learning disabilities in Nigeria, especially in English Language Education and Mathematics, where access to individual instruction is paramount. The digital gap and absence of technological infrastructure reflects the systematic differences that inhibit an inclusive education in the time of crisis. Resource distribution and hybrid learning models were short-term intervention strategies that demonstrated that, with educators, families, and stakeholders, they could be resilient and creative. Yet, not all of these measures were equally available, and many students continued to be deprived of the opportunity to learn meaningfully.

The findings thus highlight that there is an urgent need to have sustainable long-term solutions which are not short-term solutions. One of the key steps towards providing educators with the skills necessary to meet the needs of diverse learners in virtual classrooms is the improvement of teacher training on digital pedagogy and inclusive practices. Another strategy of bridging the digital divide is to improve the digital infrastructure, particularly in rural and underserved areas. In addition, more accessible and participatory learning would be made possible by developing inclusive digital learning content which is based on national curricula, but can be tailored to the needs of learners with specific learning disabilities. Lastly, effective enforcement of policies and more public-privacy partnerships could be key in scaling solutions through resource pooling, expertise, and innovation. Combined, these actions are consistent with international obligations to inclusive and equitable access to quality education, and will help to ensure that learners with disabilities are not overburdened by future disasters.

## **5.1 Conclusion**

The study on "Surviving the COVID-19 Pandemic: Challenges and Adaptations in Online Learning for Students with Specific Learning Disabilities in English Language Education and Mathematics in Nigeria" reveals that the sudden shift to online learning during the pandemic exposed significant challenges for students with Specific learning disabilities, particularly in terms of accessibility, technological barriers, and inadequate pedagogical approaches. The digital divide, especially in rural areas, further compounded these challenges, making it difficult for students to engage meaningfully with online education. However, the adaptations implemented such as hybrid learning models, targeted teacher training, and resource distribution demonstrated resilience and innovation in addressing these barriers. These efforts, though effective to some extent, underscore the need for more comprehensive and sustainable strategies to support inclusive education in Nigeria.

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## 5.2 Recommendations

To enhance the learning experience for students with specific learning disabilities in the future, several recommendations are proposed:

- i. The government and educational institutions should invest in improving digital infrastructure, particularly in rural areas, to ensure all students have access to the necessary tools for online learning. This includes providing affordable internet access, digital devices, and electricity.
- ii. Continuous professional development programs should be implemented to equip teachers with the skills needed to deliver inclusive online education. Training should focus on using digital tools effectively and adapting teaching methods to cater to students with diverse learning needs, particularly in subjects like English and Mathematics.
- iii. Educational content should be designed to accommodate various learning styles, ensuring that students with specific learning disabilities can engage with the material effectively. This includes the use of multimedia resources, interactive content, and alternative formats such as audio and visual aids.
- iv. The Nigerian government through the ministry of education should develop and enforce policies that mandate inclusive education practices in both online and offline settings. These policies should ensure that students with specific learning disabilities are not left behind in any educational reforms or technological advancements.
- v. Collaboration between the government, NGOs, and private sector entities should be encouraged to provide resources and support for students with specific learning disabilities. This includes initiatives to bridge the digital divide and promote accessibility in education.

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