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Teaching during the COVID-19 Pandemic in Nigeria: Secondary School Teachers' Experiences and Challenges

[1]Owoyemi Toyin Eunice
Department of Science and Technology Education, University of Lagos, Nigeria.

[2]Moju Monday
Department of Science and Technology Education, University of Lagos, Nigeria.

Abstract

At the beginning of 2020, most countries around the world were forced to enact total lockdown in order to curb or control the spread of coronavirus disease 2019 (COVID-19), which had become a global pandemic on an unimaginable scale. On 19 March, 2020, the Federal Ministry of Education in Nigeria announced that all schools should be shut down. The education sector was left with no choice other than to switch to distance learning modes. While many institutions in countries worldwide embraced the adoption of remote or online teaching and learning, developing countries such as Nigeria is just giving it some attention in terms of policy but not without some underlying issues. Consequently, teachers face several issues in adjusting to online teaching-learning mode, while maintaining at least a minimum level of communication with students and supporting their learning mostly through social media platforms such as WhatsApp and Telegram. However, little is known about teachers' experiences and challenges that arose while teaching during the COVID-19 pandemic. This paper presents the results of a survey of secondary school teachers conducted to investigate their experiences and the attendant challenges in the course of discharging their duties during the COVID-19 pandemic in Lagos state, Nigeria.

Introduction

In late December, 2019, a coronavirus outbreak started in the city of Wuhan, China. By February 11, 2020, the 2019 novel coronavirus officially named COVID-19 was declared a global pandemic by the World Health Organization (WHO). The WHO advised that all countries affected to enact total lockdown of all activities including those in the educational sector to curtail the spread of the deadly virus. This led to school closures in many countries, and educators were encouraged to adopt alternative learning opportunities for their students through remote technologies while schools remained shut. Furthermore, there was a necessity to provide guiding principles for delivering of online classes and approaches as required by stakeholders such as teachers and parents (World Bank, 2020).

In the first quarter of 2020, almost all educational institutions (pre-primary, primary, secondary and tertiary) worldwide closed and were forced to cancel face-to-face classes as a significant way to reduce the spread of the COVID-19 pandemic. Responding to the WHO, on 19 March, 2020, the federal government of Nigeria, through its Ministry of Education, declared the closures of all learning institutions in the country (Nlebem, 2020). This implied that both primary and secondary school students in both private and public schools in the country ended the 2nd term in the 2020 academic calendar abruptly and without taking their end of the term examinations. In addition, school activities were shifted from face-to-face to online modes and this policy response was mandated by the compelling need to keep education stakeholders, especially students and their teachers, as safe as possible during this public health emergency issue. The shutting of schools not only impacts students, teachers, and families but also has far-reaching economic and societal consequences.

For students, online learning was easier for the few with the necessary access to digital facilities such as electricity, internet connectivity, computers or mobile phones, while a large proportion of the students belonged to a disadvantaged group that lacked access. Furthermore, some of the students who have phones have basic features but not smartphones, others have very low internet connectivity, and others have no radio or television to listen to education broadcasts implemented by the government. Therefore, students from low income or poor backgrounds have been more disadvantaged because of their inability to afford remote learning, and some who can afford it also face challenges such as poor internet connectivity, an irregular supply of electricity, etc. One major issue caused by this inequality is that students who could not keep up with their peers during the lockdown may never catch up and may continue to feel the effect of this gap long after schools are reopened. This is because when schools reopened, students were presented with academic activities for a new term entirely with little or no revision of what they supposed to learn during the school closures.

According to Obiakor & Adeniran (2020), “opportunities to learn within the homes are also limited, given that a parent’s ability to provide education support to their children will be shaped by their own level of educational attainment, general literacy

level, and other commitments". For parents, children learning at home were not only a massive shock to their productivity but also to their children's social lives and learning. However, for many parents, especially those in the high and middle income classes, learning must continue, and the majority of these parents have their children in private schools. Interestingly, a larger proportion of private schools were able to quickly respond to the emergency situation by training their teachers and developing e-learning systems to manage learning activities for their students during school closures, and classes were usually conducted using Zoom, YouTube and Google Classrooms. While the government could not implement any policy initiative until several weeks after the school closures, students were lagging behind knowing well that the students would sit for external examination later in the year.

As a response measure to curb the spread of COVID-19, the Nigerian government implemented a list of risk-control measures, and directives were initiated at both the state and federal levels. These measures started with the international airport closures; the declaration of the nationwide closures of all schools; and the initial two weeks of total lockdown of the three major states, i.e., Lagos, Abuja and Ogun followed by the nationwide total lockdown. The nationwide school closures deprived millions of students at both primary and secondary levels of access to learning activities in Nigeria and affected over 40 million learners, over 91 per cent of which were primary and secondary school learners (UNESCO, 2020). In fact, the pandemic has truly disrupted all sectors of life, especially the education sector, by limiting students' access to effective learning in all 36 states in the country. For an already fragile education system due to some underlying factors, such as the Boko Haram insurgency, the COVID-19 pandemic further poses unprecedented challenges to the Nigerian education system.

The Federal Government of Nigeria, through the Federal Ministry of Education (FMoE), established the Nigeria Education Sector COVID-19 Response Strategy and launched an initiative called the "*Learn at Home Programme (LHP)*" to provide easy access to remote and online learning for students at home in an attempt to minimise a decrease in students' learning during the pandemic lockdown (FMoE, 2020).

Virtual learning platforms such as the Unity school virtual learning platform, which was used for students in federal colleges; and the West African Examination Council (WAEC), an E-learning toolkit for senior secondary school final year students, were made available to all to allow students to prepare and get ready for their external examinations in order to be awarded Secondary School Certificates (SSC) or West African Senior Secondary School Certificates Examination (SSCE). The SSC examination was administered by the West African Examination Council (WAEC), an organisation that has administered school examinations in several West African countries, including Nigeria, since 1954. Besides, on the FMoE website, links to some e-resources, such as the United Nations Educational Scientific and Cultural Organization UNESCO School Meets Learner Approach, Seesaw, Edmodo, Mobile Classroom etc., were also provided for both students and teachers.

The federal government also engaged Universal Basic Education Commission (UBEC) and the State Basic Education Board (SUBEB) to ease the process by adopting online learning. Pupils at this level were encouraged to embrace learning through radio in accordance with approved standards. Mass media such as the Nigeria Television Authority (NTA) and Radio Nigeria were tasked with providing educational content for broadcasting, especially to cater for students who could not afford online learning.

At the state level, government responses varied from state to state. Of all the 36 states in Nigeria, Lagos state has the highest number of laboratory-confirmed COVID-19 cases, attributable COVID-19 deaths and recoveries. Lagos state, as the epicentre of the COVID-19 pandemic in Nigeria, was the first state to declare total lockdown even before the federal government's declaration. Education is essential and had to continue, even though the schools were closed by the state government. Therefore, the government responded to emerging issues in education due to the COVID-19 pandemic by partnering with some private sectors. For example, the state collaborated with Microsoft Office through ATB Techsoft Solutions to train 18,000 teachers in state schools during the lockdown (Akoni, 2020). The aim was to empower teachers with the skills and capacity to teach using mobile devices and computers.

Lagos state also partnered with some private sectors such as the First Bank of Nigeria to equip and provide schools at all levels e-learning solutions and devices as part of the efforts to minimise and cushion the impact of the COVID-19 pandemic school closures on students' learning and the school academic calendar (Thisday, 2020). As the schools planned to resume the 2020 academic calendar on 29 June, 2020, the state government through the Ministry of Education also announced the distribution of 10,000 to students in Lagos state, especially to those students in suburban areas (Technext, 2020).

However, both federal and state governments responded to students' continuous learning while staying at home through policy initiatives, such as remote learning occurring primarily through TV and radio stations. However, these measures or policies did not adequately address the educational needs of all students, especially the most vulnerable or those with special needs. According to UNICEF (2020), an online approach is not always ideal for creating an inclusive learning environment. Of course, disengagement and lack of learning support for vulnerable students could widen the learning gap between the vulnerable students and the rest of the students and, furthermore, could result in an increased level of dropout or out-of-school persons. The government response to the COVID-19 pandemic eliminated the effects on the schools and learning processes in the country.

Like the rest of the countries around the world, Nigeria's academic calendar has been disrupted by the global COVID-19 pandemic. However, while other countries around the world have creatively explored how best to minimise the effect of the pandemic on their educational systems, the Nigerian government was unable to come to grips with any adequate and sustainable plan or strategy on the matter. The government's response revealed the absence of any clear thinking, ideas or initiative that could lead to workable

policy on continuous teaching and learning since the pandemic is not disappearing anytime soon. For instance, on April 8, 2020, the federal government of Nigeria declared that the West Africa Examination Council (WAEC) and National Examination Council (NECO) date should be postponed until after COVID-19.

The unpreparedness of the Nigerian government became very obvious by the middle of July 2020 when the Minister of Education declared that the country would not participate in the 2020 WAEC examinations. This decision was made without consultation and deliberation with the education stakeholders. This was about four months after the school closures. Nigeria, as one of the member countries of the West African Examination Council (WAEC), unilaterally decided that secondary school final-year students would not be allowed to participation in the examinations due to the COVID-19 pandemic without consultation and any substantial policy in place.

As a result of public reactions to the declaration, on 27 July, 2020, the Federal Government finally announced August 4 as the resumption date for the exiting classes of secondary schools in Nigeria. The decision was reached at a virtual consultative meeting among the Federal Ministry of Education, the Nigerian Union of Teachers (NUT), the proprietors of private schools and the chief executives of the examination bodies. In a statement signed by the press and public relations director of the Federal Ministry of Education, Ben Goong, the decision was made to allow the exiting classes to take their final examinations, i.e., the West African Senior Secondary School Certificate Examination (WASSCE).

According to the examination time table, the WASSCE commenced on August 17, 2020, which implies that only two weeks were given to schools to prepare their students for the examinations, although segments of the examinations particular to Nigerian students started in September of that year. Yearly, schools spend considerable time on teaching and learning processes within the four walls of the classroom to rigorously prepare students for this external examination as students' success on the examination determines their academic future. Unfortunately, many of the students could not prepare for the 2020 examination during school closures due to many factors. For instance, some of the students were more affected than the others depending on their socioeconomic backgrounds and type of school. For example, private school students had more learning support from their administrators than their counterparts in public school. Private schools used all types of online platforms and e-learning methods to reach and engage their students in meaningful learning during the school closures. Therefore, private schools were able to use the two weeks for revision before the commencement of the examination while their counterparts in public schools were overwhelmed by the loads of information forced on them by their teachers in an attempt to cover the outstanding topics on the syllabi within that short period.

There is no doubt that the COVID-19 pandemic situation has presented different experiences regarding teaching and learning in using another environment apart from physically walled classrooms. Before the outbreak of COVID-19, a typical teaching-

learning process occurred in school. Students convened in a classroom and teachers came in at specific times to teach particular subjects according to the class timetable. Then, students listened attentively, worked individually or in groups, and predominantly reproduced knowledge via paper and pencil forms of assessment (Lipowsky, 2015). However, the ICT integrated teaching-learning process was limited or not used at all in most schools (Fraillon et al., 2019).

According to Huber and Helm (2020), school closures due to the pandemic confronted teachers, students, and all other education stakeholders with a completely new situation, experience and even challenges. For students to continue learning amid the COVID-19 lockdowns, teachers had to adjust to using remote or online teaching as an alternative means of delivering classes to students. However, this requires them to use various digital tools and resources to support students' learning and solve problems that emanate from such a learning situation (Eickelmann and Gerick, 2020).

Despite the fact that most of the secondary school teachers did not adequately possess the required ICT-driven competences in planning and implementing instruction as well as assessing and reporting students' performance in online learning activities before the outbreak of coronavirus, they were expected to support students' learning through digital tools while the schools remained closed due to the pandemic. Therefore, the position occupied by teachers in supporting students to continue learning amidst COVID-19 is very critical. Hence, this study is conducted to establish teachers' peculiar experiences and challenges amidst the COVID-19 pandemic using Lagos state as a case study.

Research Objectives

The objectives of the study are to investigate teachers' experiences and the attendant challenges in the course of discharging their duties amidst the COVID-19 pandemic. Specifically, the study seeks to accomplish the following:

1. Assess teachers' teaching and learning experiences amid the COVID-19 pandemic.
2. Identify the major challenges teachers faced while utilising alternative learning technologies to support students' learning amidst the COVID-19 pandemic.

Research Methodology

The study adopted a descriptive survey and qualitative research design and was conducted in Lagos state, Southwest Nigeria with an estimated population of over 20 million people. The population for the study comprised all teachers in Lagos state teaching in public and private secondary schools. The study used a convenience sampling technique to select one hundred and two (102) teachers, which constituted the sample size for the study.

Because the majority of secondary school teachers were reluctant to complete the forms or not converse using Google Forms, relevant data were collected using validated and reliable questionnaires developed by the researchers. The questionnaire addressed the demographic characteristics of the respondents and included questions on the core objective of the study, which was the teachers' experience while teaching during the COVID-19 pandemic; and an open-ended question to obtain information on the challenges encountered. A convenience sampling technique was adopted to administer copies of the instrument to teachers at their respective schools after school reopening. Data collection began in October and concluded towards the end of the school year in December 2020. After permission was granted by the school administrator of each sampled school, the researchers administered the questionnaire to the respondents while COVID-19 protocols were duly observed. The collected data were analysed using descriptive statistical tools. The survey involved 102 secondary school teachers across 10 local government areas out of 20 LGAs in Lagos state. The demographic information of the respondents is presented in Figure 1 as follows.

Figure 1: Teachers' Qualifications, Areas of Specialisation, Years of Experience and School Types

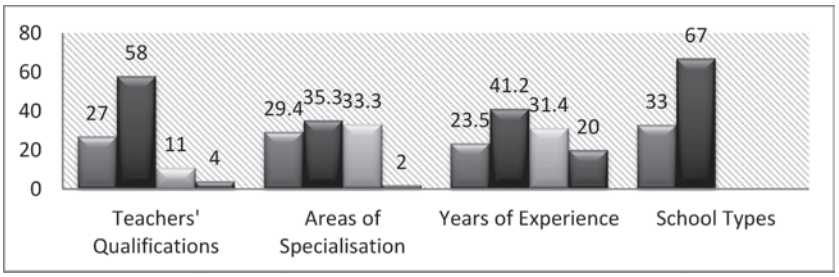

Figure 1 displays the percentages of qualifications, areas of specialisation, years of experience and the school types of the teachers who participated in the study. The chart shows that 27% of the teachers are Nigeria Certificate in Education (NCE) holders, 58% are first-degree holders, 11% are master's degree holders, and 4% are PhD holders. The chart also showed that 29.4% of the teachers specialised in arts, 35.3% specialised in business, 33.3% specialised in sciences, and only 2% of the teachers specialised in other areas such as vocational education, etc. Furthermore, the chart showed that 23.5% of the teachers had been teaching for less than five years, 41.2% of the teachers had from five to ten years of teaching experience, 31.4% of the teachers had from ten to twenty years of experience, and only 3.9% per cent of the teachers had greater than twenty years of experience. Conclusively, the chart showed that 33% of the teachers taught in public schools, and 67% of the teachers taught in private schools.

Results

Figure 2. Did you receive any support in the form of training during school closures?

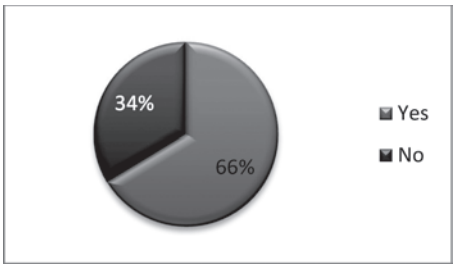

Figure 2 shows that 66% of the 102 teachers who participated in the study indicated that they received some sort of support from the state government in the form of training on remote teaching and learning during the COVID-19 school closures, and the rest (34%) did not receive any form of assistance during the period.

Figure 3. Did you support your students' learning during school closures?

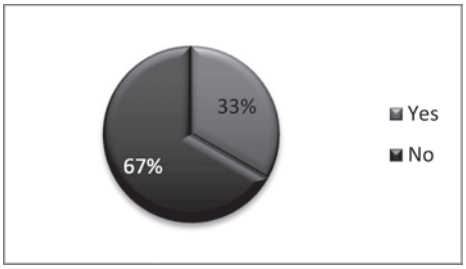

Figure 3 shows that the majority (67%) of the teachers stated that they supported their students' learning during school closures, and the rest (33%) responded no.

Figure 4. How easy was it to support students' remote learning during COVID-19 school losures?

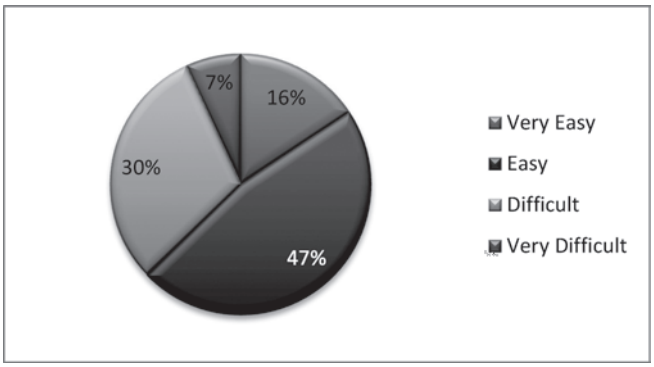

Figure 4 shows how teachers were able to support learning during COVID-19 school closures. As shown in Figure 4, 16% of the teachers responded that supporting student learning during school closures was very easy, a majority (47%) of them said it was easy, 30% found it difficult to support their students during school closures, and only 7% found it difficult.

Figure 5. What specific learning technologies did you use during COVID-19 school closures?

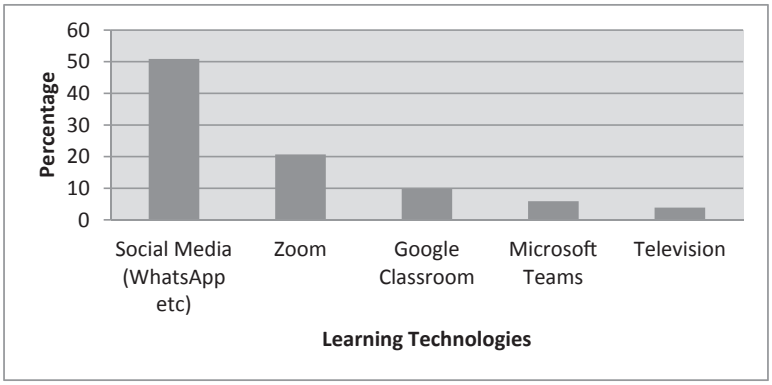

Figure 5 shows that a majority of 50.9% of the respondents used social media such as WhatsApp to engage students in learning activity during COVID-19 school closures, 20.7% used Zoom, and the rest used the following for teaching during COVID-19 school closures: Google Classroom (9.8%), Microsoft Teams (5.9%) and television (3.9%). This reveals that most of the teachers adopted social media, especially WhatsApp, for their students' learning during the COVID-19 school closures. Through WhatsApp, teachers were able to engage students in learning activities by posting their lesson notes, voice notes, etc. Then, students could open and read the information; post questions on aspects

that require further clarification and respond to questions posted by their teacher through chatting, voice notes or posting their answers.

Figure 6: How frequently did you utilise learning technologies before and during COVID-19 school closures?

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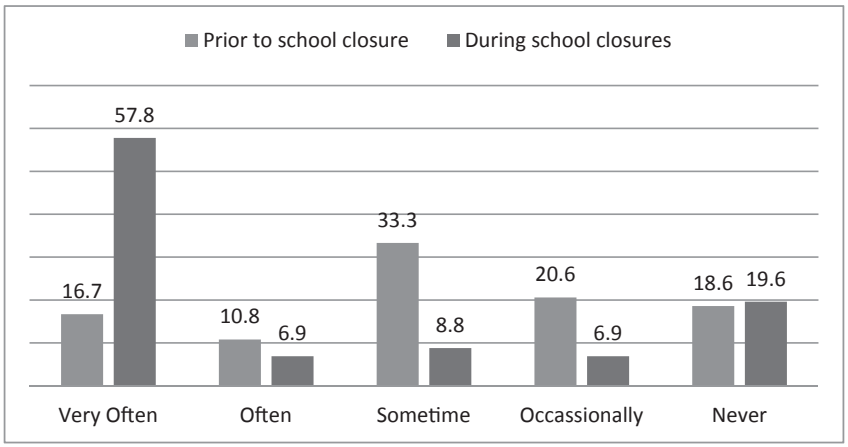

Figure 6 presents teachers' use of learning technologies before and during school closures. Before COVID-19 school closures, only 16.7% of the teachers used learning technologies, and a majority of 57.8% of them used learning technologies very often during the school closures. A total of 10.8% of the teachers often used technology before school closures, and only 6.9% of the teachers often used technology during school closures. A total of 33.3% of the teachers sometimes used technology before school closures, and 8.8% of the teachers sometimes used technology during school closures. A total of 20.6% of the teachers occasionally used technology before school closures, and only 6.9% of the teachers occasionally used technology during school closures. Finally, 18.6% of the teachers never used technology before school closures, and 19.6% of the teachers never used technology during the school closures. The chart shows that teachers often used technology during COVID-19 school closures.

Figure 7: How frequently did you utilise learning technologies since schools reopened during the COVID-19pandemic?

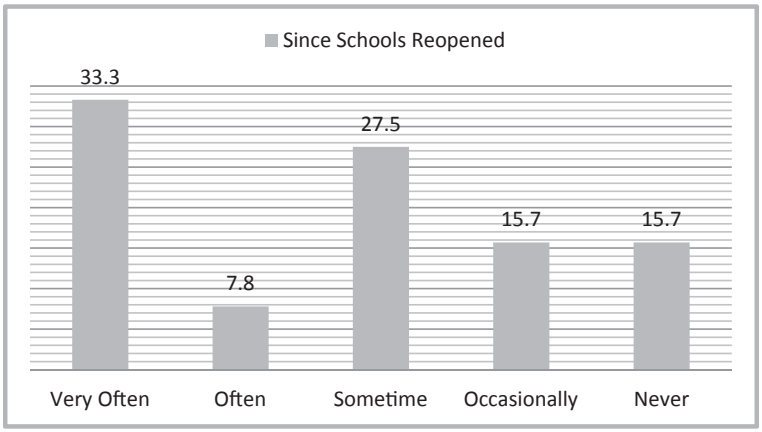

Figure 7 depicts that 33.3% of the teachers now use learning technologies very often that schools are opened, 7.8% of the teachers often use technology, 27.5% sometimes use technology, 15.7% occasionally use technology, and 15.7% of the teachers never use technology for teaching since schools reopened for teaching and learning. This indicates that despite teachers having now returned to the face-to-face mode of teaching the teachers, they often incorporate learning technology into teaching.

Figure 8. Which methods/strategies do teachers frequently use since schools reopened during the COVID-19 pandemic?

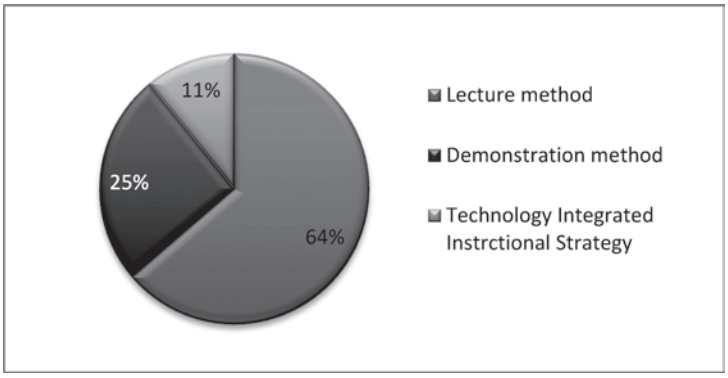

Figure 8 indicates that 64% of the teachers used lecture methods for teaching, 25% of the teachers used demonstrations, and 11% of the teachers used technology-integrated instructional strategies for teaching. The teachers mostly used lecture methods for teaching in secondary schools.

Figure 9. Which teaching mode do you prefer using during the COVID-19 pandemic if facilities are readily available?

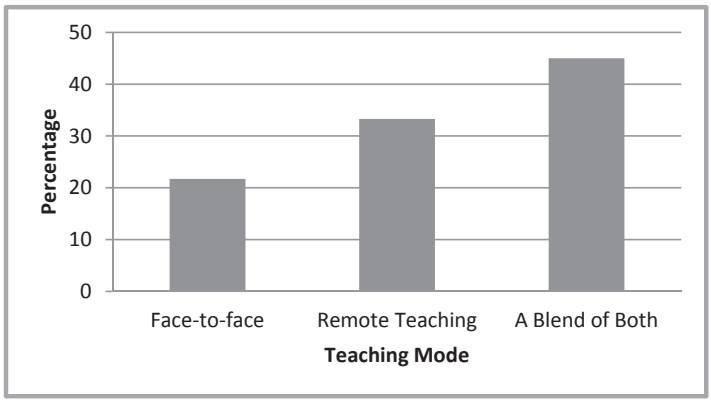

Figure 9 shows that 21.7% of the teachers preferred the face-to-face mode, 33.3% of the teachers preferred remote teaching, and 45% of the teachers preferred using a blend of both face-to-face and remote learning to engage their students.

Table 1: Teaching Challenges faced by Teachers during COVID-19 School Closures

S/N	Category	Specific Responses from the Teachers
1	Facilities and connectivity issues	Not all students could participate in online learning
		Lack of access to internet enabled devices for students
		Poor internet connectivity
		Irregular electricity supply
		Most of the students do not have smartphones or computers
		Inability of parents to provide smartphones and data for their children
		Inability to deliver additional learning material to students
		Data runs out quickly due to low network signal or poor network
		High internet subscription costs
2	Pedagogical issues	Slow pace of student learning
		Limited learning opportunities
		Students had many distractions at home
		Inability to engage students in practical or laboratory work in practical related subjects
		Very difficult to assess the level of participation of students
		Students' level of involvement cannot be easily determined

		Difficulty in submitting assignments remotely
		Inability to adequately enforce discipline
		No social contact with students and their teacher
3	Teacher-student Interaction Issues	Ineffective communication and interaction between teachers and students
		Low student online attendance compared to face-to-face
		Inability to cater to students' diverse needs
4	Digital Skill Issues	Insufficient digital skills by both teachers and students
		Limited digital manipulative skills by the teachers
		Lack of technical know-how of the learning devices
		Lack of familiarity with the learning technologies

Table 1 shows major challenges reported by teachers under four categories.

Discussion of the Findings

There is no doubt that the COVID-19 pandemic has greatly impacted the teaching and learning process in Nigeria, especially how teachers teach and how students learn. COVID-19 brought a new teaching system or approach that embraced learning technologies and promoted remote learning where students are expected to be self-motivated to drive their learning.

Teachers' Experiences

While responding to the first question regarding teachers' experiences, the majority (66%) of the teachers indicated that they received some sort of support from the state government. A total of 67% of the participants were able to support their students' learning during COVID-19 school closures (see Figures 2 & 3). In responding to the question on how easy it was to support students' learning during the lockdown, the majority (63%) of the teachers said it was easy, and 37% of teachers said it was difficult to support students' learning during the period (Figure 4). This could be because most of the teachers were young and early in their careers with less than 10 years of teaching experience (see Figure 1) who might have been using technology before the school closures. This set of teachers would find it easy to support their students during the school closures. Perhaps the finding could be attributed to a sort of support teachers received from the government, private organizations or school owners (e.g., privately owned schools) (see Figure 2). This finding is in line with that of Di Pietro et al. (2020) who found that younger teachers are likely to be more exposed to digital technologies due to their high level of awareness of the significance of technologies in the delivery of classes, their fast-paced evolution, and their eagerness to undertake continuous ICT professional development on their own.

This finding corroborates Strauss's (2005) assertion that educators now find it easy to incorporate educational technologies into the teaching and learning process to support their students.

When we asked the teachers how they supported students' learning during the pandemic school closure, the majority (55.9%) of them reported that their students were learning through social media platforms, especially WhatsApp (see Figure 5). In addition to the largest proportion of the respondents having young careers (see Figure 1), most (64%) of them also reported that they were supported by either the government or private sector through training on remote teaching. These findings corroborate previous assertions that the youth of today are known by many names, such as millennials (Howe & Strauss, 2000), digital natives (Prensky, 2001), and digital generation (Ali, 2018). This is also in line with the findings of Jeanne, Leonie and Parlo (2020) who stated that teachers are moving content and teaching materials online and adapting to navigating the learning technologies at their disposal.

Regarding the frequency of technology usage before the school closures, only 16.7% of teachers were using remote tools very often, even though before the pandemic-induced school closures, numerous digital tools were available to support teaching. During school closures, the majority (57.8%) of the teachers frequently use learning technologies, but only 33.3% are still frequently using them since schools reopened (see Figures 6 & 7). Surprisingly, the study further revealed that as soon as schools reopened, many of the teachers immediately reverted to using old traditional methods of teaching, with the majority frequently using the lecture method (64%), followed by the demonstration method (25%), and only a few (11%) of them were adopting a technology integrated strategy (see Figure 8). This finding is in line with the study conducted by Simmons (2011) who reported that teachers hardly employed and used learning technologies to develop students' knowledge and skills in the classroom.

Although the majority (45%) of teachers preferred a blend of face-to-face and remote teaching modes, if facilities and necessary supports were readily available, 33.3% still preferred face-to-face teaching, and only 21.7% preferred remote teaching (see Figure 9). This finding agreed with the conclusion of Kennedy & Archambault (2012) who reported that teachers prefer a blended mode of teaching and mostly adopt convenient methods that allow them to be free and express themselves well in the classroom. Thus, there is a need to reinforce teachers' training to focus on the online learning environment. Some of them still preferring the face-to-face mode of teaching during the pandemic might be due to the challenges of remote teaching that they experienced during the COVID-19 pandemic school closures.

Challenges

As presented in Table 1, the major challenges reported by teachers are related to facilities and connectivity, student-teacher interaction, and pedagogical and digital

skills issues. For example, teachers expressed their concerns that not all students could participate in online learning because their parents could not afford internet-enabled mobile phones or computers. In particular, a teacher reported the following: "*I have 46 students in my class, but only 23 were on my WhatsApp learning platform, and not all of them participate during the teaching and learning process using this medium*."

A teacher also reported the following: "*Most of my teaching is done on WhatsApp through voice recording. Students listened to the recording without asking any questions. Even when I asked questions, only a few of them respond*". Another teacher reported the following: "*Although I tried as much as possible to teach my students on WhatsApp platform, I find it difficult to know if they are actively following my teaching because most of them on the platform joined using either their parents' or family members' phones*"

The lack of a constant supply of electricity was expressly stated by the respondents, and some even complained about total blackouts in some areas where students and teachers resided. A particular teacher reported the following: "*As a teacher, I am struggling to fuel my generator so that I can charge my laptop to post my lesson on WhatsApp. Many of my students are not on the platform because they are living in areas where electricity has not been supplied for the past six months because of a faulty transformer, and some are located where there is no constant supply of electricity*."

Problems with connectivity and access to the internet were reported by the respondents as parts of the significant challenges observed while supporting student learning during COVID-19 school closures.

A teacher reported the following: "*The cost of an internet subscription is now higher than before the pandemic started, and this is a life wire to get connected to the students via different remote platforms for teaching/learning activities to strive. Therefore, for online learning to be effective, the government needs to subsidise the cost of internet subscriptions for both teachers and students*."

The teachers also regarded some resources, such as remote learning tools, internet access and a regular supply of electricity, as learning resources to which students had unequal access during the lockdown. This is not surprising because opportunities to learn within the homes during the lockdown were limited by parents' abilities to provide learning support to their children, and this could be determined by the socioeconomic status and level of educational attainment of the parents. Again, teachers complained of not having adequate interaction with their students. They reported how they were unsure of students' engagement and learning because of limited interaction. A particular teacher expressed his frustration by commenting that "*most of the times, I try to engage my students by encouraging them to ask questions, and I also ask them questions to which I get few responses or no response at all*"

Another major challenge that was highlighted in the study is the digital skills of the teachers. Some of the teachers expressed their concern about the inability to engage students in practical and laboratory-related activities during the lockdown. Although some of the teachers were given training during the lockdown, they reported inadequate

digital skills for effective student engagement and learning support, especially in subjects that require practical activities. According to Lawal (2020), it is much more difficult to actively involve students when teaching online than face-to-face. Therefore, massive training and retraining of Nigerian teachers on the use of remote technologies with a special focus on teaching practically oriented subjects at all educational levels is not an option but a necessity in this new normal. Owoyemi (2017) opined that practical activities should be given priority in the education of students engaged in distance learning.

Conclusion and Implications of the Study

This study accumulated information on teachers' experiences while supporting students' learning during the COVID-19 pandemic and the difficulties they encountered during the sudden shift from face-to-face classes to remote teaching and learning. Although the COVID-19 pandemic disrupted student education in Nigeria, similar to many other countries, the government was able to respond in a way that reduced the decreased learning among Nigerian students. The study revealed that social media (WhatsApp) were emerging learning platforms within the Nigerian context during the COVID-19 pandemic. However, this is not without attendant challenges with regard to remote teaching and learning. Some of the major obstacles identified were a lack of access to an uninterrupted supply of electricity, high-speed Internet and suitable remote learning tools/equipment. Others obstacles are the following: the absence of social contact between teachers and students, the digital divide between low-income and high-income families, and technical difficulties when using learning devices.

Since not all students had access to the limited learning support from their teachers, the key implication is that inequality of students' learning outcomes is obvious as students from low economic backgrounds and even those with special needs might not be learning at all as long as the pandemic exists. Also, an additional factor that may increase the gaps in inequality in learning outcomes during a pandemic such as COVID-19, is teachers' preparedness in learning technologies. This would occur if students from lower socioeconomic statuses are more likely to attend schools where teachers are less able to fully implement learning technologies given their lack of training or limited ICT skills.

Another implication of this study is that social inequality in education among students might be further reinforced if necessary measures to ensure that no child is left behind during COVID-19 and beyond are not implemented. This is because students from high socioeconomic backgrounds are likely to be more visible in online teaching and learning platforms with better digital tools and better connectivity. Therefore, this study is of great value to policymakers, curriculum planners, educational leaders, and teachers as they see the COVID-19 pandemic as an opportunity to learn, reshape, and build resilience into the educational system in Nigeria. The findings also have implications for financing education in Nigeria in that there is a need to focus more attention on equipping classrooms with tools that would facilitate teaching and learning and bridging

the gap that exists among students from low-income and higher-income families. This is crucial in order to ensure that the students in public schools do not lack in the appropriate knowledge in their external examinations.

Recommendations

Even the online learning technologies adopted to reach out and support students' continuous learning during COVID-19 have not successfully worked due to many factors. It is therefore recommended that Nigeria as a nation explore and leverage some teaching and learning opportunities made available by the COVID-19 pandemic situation as much as possible. As a matter of urgency, the government, private organisations and NGOs are charged with investing in remote teaching and learning tools/facilities, such as strong and cheap internet connections with wider coverage, a constant supply of electricity through alternative sources, smartphones, computers, etc., to make accessibility a reality in online learning.

The government, as a matter of urgency, should establish a modality to bridge educational divides widened by COVID-19 school closures and further exacerbated by the shift in teaching/learning approaches adopted during the lockdown. The Ministry of Education should also develop modalities to explore some of the learning delivery methods or strategies adopted during the lockdown for the pre-pandemic out-of-school population while delivering education to children in situations where cultural and economic circumstances prevent them from accessing learning in schools.

The COVID-19 pandemic is definitely not going to be the last crisis that will threaten school continuity in Nigeria, given the increase in the number of infectious diseases discovered in the world or the unresolved conflict and Boko Haram insurgency in the northern part of the country. It is therefore imperative that the government create holistic policy initiatives that identify ways to ensure continuous learning and provide necessary support for both students and teachers during times of crisis.

Both the government and private sectors should support teachers with relevant and adequate training and retraining programmes on the use of learning technologies and how to redesign their pedagogy to help them become accustomed to online learning and teaching. However, such training should also include basic principles of how to effectively use these tools for student engagement and learning.

The government should establish provisions for teachers to use a range of learning technologies or remote learning tools while generating evidence on which is more appropriate and suitable in particular contexts such as the nature of the subject or topic and the age range of learners. In addition, such evidence should be considered in policy decision making to ensure learning for all school-age children such that no child is left behind in Nigeria during the COVID-19 pandemic and beyond.

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