

A Study of Secondary School Teachers' Experience with E-Learning during Covid-19 in Delta State, Nigeria

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Abstract

This study assessed secondary school teachers' experience with e-learning during COVID-19 lockdown in Delta State. Due to the pandemic schools are closed, teachers can no longer teach physically in class. Could e-learning be effective especially when the unexpected happens, teachers faced with a computer crash thus this can be frustrated especially during classes or when receiving assignments from pupils/students. This study intend to expose devices teachers used to impact knowledge to pupils. The study adopted a descriptive survey research design. Six (6) research objectives were formulated for this study. A questionnaire was constructed after consultation of related literature to ensure that relevant items were included. A questionnaire tagged "Secondary School Teachers Experience with E-Learning during COVID- 19 Lockdown Questionnaire" (SSTELDC19LQ) were self -constructed by the researchers. The population of the study comprised of 180 teachers in Delta State who participated in e-learning to meet up with the third curriculum and eventually used for promotion of students to the next class. The researchers used the purposive sampling technique in selecting the sample for the study because of easy accessibility to respondents and schools that participated in e-learning during the lockdown. The questionnaire was administered face to face to secondary school teachers in Delta State with the support of five research assistants who were trained on how to distribute the questionnaire to the respondents. Out of the 180 copies of the questionnaire administered on Secondary school teachers in Delta State, 126 usable copies (that is, a response rate of 70%). The data collected were analysed using percentages and presented in tables. The findings revealed that secondary school teachers in International Unity School Edjeba, Alvina High School Effurun, Mother of Redeemer Catholic School, Effurun, Nehemiah International School, Okuokoko, James Welch Grammar School, Emevor and St. Theresa Girls Grammar School, Ughelli in Delta State participated in e-learning during COVID- 19 lockdown. The study further revealed that WhatsApp was dominated by schools for e-learning, the majority of participants used their personal phones, video lectures were mostly used so that participants can learn at their free period, and teachers were going to school to receive materials from their students for assessment. Finally, the majority of the respondents have challenges associated with slow Internet signals and the high cost of data. The study recommended that teachers in Delta State should increase the extent to which they collaborate on e-learning platform.

Keywords: Secondary school teachers experience, E-Learning, Covid-19, Lockdown, Delta State.

Introduction

The outbreak of the COVID-19 Pandemic in the year 2020 across the world has tremendously affected the education systems in which students were asked to remain at home, and Nigerians have not been an exception to these changes. A report from The World Bank (2020) stated that several countries had implemented different learning systems as physical schools were closed due to COVID-19. United Nations Educational, Scientific and Cultural Organization (2020) stated that as many as 1,186,127,211 learners were affected across the globe, or about 67.7% of the total enrolled learners from 144 country-wide closures, and nations had to change their learning systems due to COVID-19. The sudden closure of schools meant that education policy makers, school principals and teachers had to find alternatives for face-to-face instruction in order to guarantee children's right to education (OECD, 2020). Hodges, Moore, Lockee, Trust and Bond (2020) asserted that the situation created by COVID-19 has been proposed as 'emergency remote teaching' to distinguish it from high-quality online education. Yilmaz (2019) asserted that it is a form of distance education to provide learning experiences for pupils, students, both children and adults, to access education from remote locations or geographical distance or who, for various reasons, cannot attend a school, vocational college, or university with the use of digital technologies.

According to Eze, Chinedu-Eze and Bello (2018), e-learning is concerned with the holistic in corporation of modern telecommunication equipment and ICT resources into the education system. Nguyen (2015) opined that e-learning class will be as effective as traditional class if it is designed appropriately. In the same vein, Gros and García-Peñalvo, (2016), Hong, Wang, Xu, Yan and Hou (2017) and Aljawarneh (2020) affirmed that e-learning is the delivery of learning through technology and the Internet. Technical proficiency of teachers related to usage of computer and internet is a major factor determining the effectiveness of online classes (Muthuprasad, Aiswarya, Aditya, & Jha, 2021). Accordingly, Sun and Chen (2016) opined that effective online class depends upon well-structured course content, well-prepared instructors, advanced technologies and feedback and clear instructions (Gilbert, 2015). Similarly, Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan (2020) noted that e-learning have provided solutions for schools in this pandemic period and most schools have started implementing it. They further stated that teachers, as the forefront of the

implementation of e- learning must be able to use all instructional components. More so, teachers have tasks and responsibilities that are not easily transferrable when they change from the face-to-face learning system in the classroom to e-learning coupled with e-learning experiences that have never been implemented before (Rasmitadila Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan, 2020).

Accordingly, Yao, Chen and Xu (2020) asserted that a teacher must align the instructional objectives with the context of teaching in e- learning environment. Heng and Sol (2020) emphasized that teachers they should keep themselves abreast of new developments in their fields, especially regarding new teaching techniques that can keep students engaged in an e-learning environment. However, Alrefaie, Hassanien and Al-Hayani (2020) asserted that continuous support for the training and retraining of teachers in using technology, designing and monitoring will enhance effective teaching in the e-learning environment. Delta state is an oil producing state in Nigeria with its state capital at Asaba with twenty –one local governments Area.

However, FineLib Nigeria Directory (2016) avowed that the major populated places in Delta State are as follows: Abraka, Agbara-Otor, Agbarho, Aladja, Bomadi, Burutu, Egini, Eku, Forcados, koko, Obiaruku, Ogbe-Ijo, Ogwashi-Uku, Orerokpe, Orhuwhorun, Osubi, Otor- Udu, Ozoro, Patani, Sapele, Ughelli, Warri, among others. In light of the foregoing, this study will focus on secondary school teachers' experience with e-learning during COVID- 19 lockdown in Delta State, Nigeria. Teaching of pupils' is vital especially in this pandemic era, teachers need to impart knowledge in order to keep pupils' abreast of their curriculum and not to lose any term or session. However, the lockdown imposed globally to stem the spread of the virus may affect access to teaching pupils. The teaching of pupils in Delta State is tied to the growth and general wellbeing of the citizenry. Adequate teaching curb illiteracy and uninformed in our society. Teaching during COVID -19 requires technological gadgets. The question is: Do the teachers in Delta State participated in e-learning during COVID-19 lockdown. If yes, what are the devices used for teaching and challenges accounted during e-learning; is there issue of poor signals and unable to post/download learning materials due faulty computer when classes are on? This study is intended to fill this research gap.

Objectives of the study

The objectives of the study were to examine the teachers' experience with e-learning during COVID-19 lockdown in Delta State, Nigeria. The specific objectives were to:

1. identify the media through which the teachers participate in e-learning during COVID-19 lockdown;
2. examine the gadgets they use to participate in e-learning during COVID-19 lockdown;
3. investigate the learning materials they delivered to pupils in e-learning during COVID-19 lockdown;
4. identify the format of materials they delivered to pupils' during COVID-19 lockdown;
5. ascertain how they respond to pupils' assignments/pupils seek explanations for the lessons they are not cleared with in e-learning during COVID-19 lockdown; and
6. identify the barriers to e-learning exercise during COVID-19 lockdown.

Literature Review

Media through which Teachers' Participated in E-Learning during COVID-19 Lockdown

There are several media that teachers used to deliver lessons in e-learning during COVID-19 lockdown these include WhatsApp, Zoom, Facebook, Instagram, Google, Webinars, YouTube, Edmodo, among others. Yates, Starkey, Egerton and Flueggen (2020) asserted that the media in which teachers used for e-learning is a platform known as Google Classroom or proprietary websites such as Education Perfect which could be accessed anytime. Goh and Sandars (2020) pointed out that the educators worldwide, being deeply involved in the current tremendous shift towards e-learning, have to adapt to the current major educational challenges. Norton (2018) asserted that school counsellors could begin to incorporate social media in their school counselling programs. Shahzad, Hassan, Abdullah and Hussain (2020) asserted that e-learning is covered under a larger term of technology-based learning through websites, learning portals, video conferencing, YouTube, mobile apps, and thousand types of free available websites for blended learning tools. Goh (2016) appreciated the free e-learning webinars for health professional educators worldwide and the national coordination between medical schools in sharing such training courses.

Adnan (2020) stated that institutions are adopting the technologies available such as digital Video conferencing platforms like Zoom, WhatsApp and Google Classroom. Chen (2010);

Yengin, Karahola and Karahola (2011); Adnan (2020) opined that these will be enhancing e-learning globally. Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan (2020) asserted that WhatsApp, Google Forms, Worksheets, YouTube, and Zoom also served as media in delivering learning material to pupils during COVID-19. They further opined that teachers carried out the questions and answers method and discussion using Zoom, Google Classroom and Powtoon. Rossen (2017) and Watson (2020) affirmed that the technological experience of teachers in an e-learning environment is also one of the challenges that determines the smoothness of instructional activities.

In a study on the media used for educational purposes during COVID-19 in Pakistan, it was found that the majority of academic establishments in Pakistan provide electronic learning using various media such as Zoom, WhatsApp, and Google Classroom (Adnan, 2020). Video conferencing calls climbed five-fold during COVID-19, according to the PTA study. SM's function in education has grown in importance during COVID-19, since it improves connection and provides collaboration chances for those who are just starting to utilize it (Islam, Tanvir, Amin and Salman (2020). Teachers, students, and academic institutions can use SM technologies to improve their teaching or learning techniques and maintain in touch with classmates or instructors via online forums in order to avoid COVID-19-related constraints (Abi-Rafeh, Hawnary and Azzi, 2019; Abi-Rafeh and Azzi, 2020).

Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany was investigated by Konig, Jager-Biela, and Glutsch (2020). The research divided the media used to deliver e-learning into two software categories: tutorials and communication tools. The tutorial software includes tools for direct teachings like drill and practice software, computer-assisted instruction, and learning games etc. The communication media are email, video conferencing, and computer supported collaborative learning systems and social platforms.

Gadgets Used to deliver Lessons in E-Learning during COVID-19 Lockdown

There are several gadgets use by teachers to deliver lessons to pupils in e-learning during COVID -19 these include phones, tablets, laptops among others. Muthuprasad, Aiswarya, Aditya and Jha (2021) study reveal that they are various devices preferred by the teachers when conducting online classes in which Smartphone was rated (57.98%), laptop (35.83%), tablet

(4.89%) and desktop (0.65%). They further suggested that if any organization want to develop an application for the e- learning, it has to ensure that the platform is compatible with smartphone. Al-Swalha, Ababneh, Al-Horman and Shdaifat (2020) further asserted that, for effective e- learning to be delivered to students, teachers need to have sophisticated information and communication technology such as hardware and software support system.

During the COVID-19 epidemic, Bhagat and Shimray (2021) investigated smartphone usage among university students. The data found that 'a smartphone makes it simpler to obtain study materials' ($m=2.08$) and 'a smartphone is the best possible assistance for learning anytime and anywhere' ($m=2.44$) are the two most prevalent reasons for using a smartphone and rank first and second, respectively. Also, Adam and Metljak (2021) investigated the experiences of Slovenian primary school music instructors with varying professional backgrounds in remote education and practical use of ICT during the COVID-19 outbreak. The study emphasized the use of computer and internet devices as a panacea for the deployment of electronic learning in teaching and learning.

Similarly, Olayemi, Adamu and Olayemi (2021) undertook a study on perception and readiness of students towards online learning in Nigeria during Covid-19 Pandemic. Their findings revealed that access to good internet and electronic device were key requirements for passing knowledge via e-learning platforms. As 75 (50.7%) of the respondent agree to having access to good internet broadband but this was closely followed by 36 (24.3%) of respondents who disagree to having access to internet broadband. Surprisingly, most of the students 74 (50.0%) agree to having a sound electronic device (Computer or Smartphone), this was followed by 59 (39.9%) respondents who strongly agree to having an electronic device.

Hani, Hijazein, Hadadin, Jarkas, Al-Tamimi, Amarin, Shatarat, Abeeleh and Al-Taher (2021) studied e-learning during COVID-19 pandemic; Turning a crisis into opportunity: A cross-sectional study at The University of Jordan. Their findings revealed that 76.3% of all the students believed that the electronic devices did not cause any financial burden. The most popular devices used to connect to the internet were mobile phones and laptops, followed by tablet and desktop. Demuyakor (2021) examined COVID-19 Pandemic and Higher Education: Leveraging on Digital Technologies and Mobile Applications for Online Learning in Ghana. Demuyakor findings show clearly that the digital tools used were Smarts phones and software

mobile applications, Laptop computers, Cameras and digital recorders and online collaboration devices.

Formats through which Teachers' delivered lessons to pupils During COVID-19 Lockdown

There are several formats in which teachers delivered lessons to pupils during COVID-19 lockdown these include recorded voice teaching, recorded video teaching, teachers' handwritten notes/assignments, typed lecture notes/assignments, plain social media, pictorial/images among others. Heng and Sol (2020) asserted that teachers who play an inseparable role also face the pressure of sharing extra workload because they are in charge of transforming course/subject contents, learning resources, and assessments to online platforms. The use of instructional media such as recorded video teaching aims to make it easier for students to understand the subject matter (Abdo and Semela, 2010; Kadzera, 2006) by providing a different learning experience that are expected to stimulate the interest of students and their motivation to learn (Aini, 2013; Arsyad, 2014).

Rasmitadila Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan (2020) asserted that the instructional media that teachers most often used were recorded videos teaching, which were either downloaded from YouTube or learning videos that teachers had created before the COVID-19 Pandemic. They further stated that some teachers said that instructional videos were one of the most accessible media to use because the teacher already had time, and students could easily understand the subject matter. Teachers sent lesson materials using WhatsApp, Google Forms, and Worksheets to students' parents, which was subsequently given to the students (Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto, and Tambunan, 2020).

According to Organisation for Economic Co-operation and Development (2019) posited that during COVID-19 online distance learning platforms can be delivered using formats like video lectures, text, online lectures/ exercises and other open educational resources. Electronic learning, according to Snoussi and Radwan (2020), during COVID-19 is based on online courses and tutorials delivered using learning management systems such as Moodle and Blackboard. Video conferences, live-streaming sessions (BB. Collaborate), asynchronous audio or video classes, assignments and projects, open schedule online courses, and hybrid online courses are all

examples of course formats. Also, e-learning in teaching was investigated by Ibrahim, Mutiarin and Purnomo (2020).

Electronic learning courses can be offered by DVD or CD-ROM, video tape, or over a television channel, according to the study. It is interactive in the sense that you may communicate with your teachers, professors, and classmates. It may be presented live, with the option to "electronically" raise your hand and engage in real time, or it may be a taped lecture. Malaga and Koppel (2017) did a comparison of video formats for online teaching. Their findings revealed that the formats of video that can be used for electronic learning include AVI (Windows Media Player), WMV (Windows Media Player), QuickTime (Windows Media Player), MPEG-4 (Windows Media Player) and Flash (Browser Plugin Required).

Platforms used by Teachers in Attending Students during COVID-19 Lockdown

There are several ways teachers' responses to pupils' assignments/seek explanations for clarification such as posting marked assignments of pupils/students' personal social media account, calling pupils/students on the phone explaining the concepts, allowing pupils/students to call them among others. Van Lieshout (2020) asserted that in the United Kingdom, the BBC has started to collaborate with teachers and educational experts and provides daily lessons to pupils in year 1 to 10, including videos and interactive activities aimed at keeping up students' motivation and at stimulating their socio-emotional skills. Virtual learning, according to Meyer (2021), is the way forward for educators.

Most schools have maintained to organize instructors and students in class groups and follow adjusted school timetables, according to the report, in an attempt to duplicate conventional teacher and student interactions in Zoom classrooms. The finding indicates that zoom classroom was used by teachers for communicating with students. During Covid-19, Shammari (2021) investigated Devices and Platforms Used in Emergency Remote Learning and Teaching: A Case of English Major Students in Saudi Arabia. Shammari findings revealed that laptop computers were the most popular and preferred method of communication between teachers and pupils. They also discovered that the Zoom platform came out on top, followed by Blackboard, in terms of student preferences. Aduba and Mayowa-Adebara (2021) investigated Online Platforms for Teaching and Learning in the COVID-19 Era: The Case of LIS Students at Delta State University in Abraka. LIS educators utilized WhatsApp and Telegram to offer online

lessons during the time of nationwide lockdown induced by the COVID-19 epidemic, according to the report.

Barriers to E-Learning exercise During COVID-19 Lockdown

There are several barriers affecting teaching in e-learning these include technical issues, poor internet signals, unexpected broken down of computers/faulty phones, data packages, pupils not having laptops, phones among others. Accordingly, Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan (2020) asserted that teachers faced several challenges related to the emergence of obstacles associated with technical issues, parents not having cell phones/laptops, and Internet signals are poor, especially in the suburbs teachers who do not have online teaching experience or have difficulty running technology and information tools will usually find it challenging to carry out e-learning teaching. Plitnichenko (2020) asserted that another problem teachers faced is a computer crash that usually happens at the most unexpected moment and thus this can be frustrated especially during classes or when receiving assignments from pupils/students.

Similarly, Strunc (2020) opined that lack of physical interaction in e-learning has led to a decline in the enthusiasm to teach. In addition, Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan (2020) stated that teachers cannot interact directly (face-to-face) physically with students, so teachers cannot gauge the understanding of students when teaching online. Plitnichenko (2020) is of the opinion that millions of teachers around the world are experiencing technical difficulties because of the high usage rate of e-learning systems, platforms are overloaded, poor-quality video and audio, internet problems, video streaming software, and other digital tools.

More so, study of Muthuprasad, Aiswarya, Aditya and Jha (2021) reveal that most students reported that e-learning could be more challenging than traditional classroom because of the technological constraints, delayed feedback and inability of the teachers to handle effectively the Information and Communication Technologies. Muthuprasad, Aiswarya, Aditya and Jha (2021) stated that lack of connectivity was ranked as the major hindrance in e-learning and that the situation is even worse for those from remote areas. Lack of infrastructure, the absence of adequate preparation in schools and among teachers, as well as, in some cases, the lack of curriculum guidelines and lack of basic digital skills making them unprepared to adapt to the

new situation (OECD, 2020). Obododike and Okekeokosisi (2020) asserted that one of challenges facing e-learning in Nigeria is epileptic power supply especially in rural areas as there is no guarantee of at least two hours" power supply at a stretch.

Naveed, Muhammed, Sanober, Qureshi, and Shah (2017) investigated the obstacles to successful E-Learning implementation in Saudi Arabian universities. Infrastructure and Technology Dimension was determined to be the most significant, with a mean of 3.61, while Students' Dimension was found to be the least significant, with a mean of 3.45. Furthermore, the Lack of Time to Develop E-courses Barrier Factor, with a mean of 3.70, is the most significant of the sixteen variables, while the Lack of ICT Skills for Students, with a mean of 3.20, is the least significant. Kamba (2009) also conducted An Empirical Study on the Problems, Challenges, and Benefits of Using E-Learning in Nigerian Universities. The findings highlighted obstacles such as a shortage of energy, inadequate finances to upgrade and maintain equipment and facilities, poor policy implementation, and tepid attitudes among staff and students toward e-learning.

According to Daniel (2009), there are four barriers to e-learning deployment in underdeveloped countries: Connectivity which is Limited or lack of connectivity in many poor nations, particularly in Nigeria's universities, impedes access to online learning (e.g. e-learning). Equipment: E-learning necessitates the use of equipment that facilitates learning, yet computers, digital technology, and the Internet are not readily available in several Nigerian colleges. Educators may create and generate instructional content with the help of software. This software is expensive, and several Nigerian colleges do not have it to support e-learning programs. Training: No amount of connectivity, equipment, or software can help if individuals aren't taught how to utilize it.

Methodology

The study used descriptive survey research design. A questionnaire was the instrument for data collection. The questionnaire was constructed after consultation of related literature in order to ensure that relevant items were included in it. The questionnaire was given to experts in the Department of Library and Information Science, Delta State University, Abraka, who validated, resolved defects and modified the questionnaire. To ensure that the structured questionnaire was reliable, a pilot study was conducted using 30 teenagers in Apata Memorial high School Isolo,

Lagos, Nigeria. The results of the reliability test using Cronbach's alpha reliability coefficient was 0.85. The population of the study comprised of 180 secondary school teachers in Delta State, Nigeria who participated in e-learning in order to meet up with the third curriculum and eventually used for promotion of students to the next class. The researchers used purposive sampling technique in selecting sample for the study because of easy accessibility to teachers that participated for e-learning during the lockdown. Data were collected through the use of a self-constructed questionnaire entitled: "Teachers Experience With E-Learning During COVID-19 Lockdown Questionnaire (TEELDC19LQ). The questionnaire was made up of two sections.

The first section focused on the demographic information of respondents while the second section on Teachers experience with e-learning during COVID-19 lockdown consisting of five items: (i) the media which teachers' used to participate,(ii) who owned the garget teachers' used to participate, (iii)learning materials they deliver to pupils, (iv) formats of materials/resources/presentations pupils received from their teachers,(v) how does teachers' respond to pupils' assignments/ pupils' seek explanation for points they are not cleared with and (vi)barriers encountered by teachers during e-learning. The questionnaire was administered face to face to pupils in Delta State with the support of six research assistants who were trained on how to distribute the questionnaires to the respondents. Out of the 180 copies of the questionnaire distributed to teachers in Delta State, 126 usable copies (that is, response rate of 70%). According to Richardson (2005), a response rate of 60% or more is desirable and, adequate for survey research. Therefore, the response rate of 70% was considered very adequate for the study. The data collected were analysed using percentages and presented in tables.

Results and Discussion

Results as presented in table 1 show that out of the 180 copies of the questionnaire distributed to pupils in Delta State, 126 usable copies (that is, response rate of 70%). According to Richardson (2005), a response rate of 60% or more is desirable and, adequate for survey research. Therefore, the response rate of 70% was considered very adequate for the study. The data collected were analysed using percentages and presented in tables.

Table 1: Questionnaire Response Rate

Secondary School Teachers in Delta State	No. of Questionnaire Administered	No. of Questionnaire Returned	Percentage (%) of Questionnaire Returned
Total	180	126	70%

Source: Office of the school Administrators understudy, 2020.

Table 2 reveals the secondary school teachers used in this study. International Unity School Edjeba attracted the highest with 52 (41.26%) respondents. This is a reflection of the fact that teachers in International Unity School Edjeba were fully involved in e-learning during the pandemic which aid the students/pupils not to miss a term. This is followed by Edjeba Estate School Edjeba. The table clearly reveals the secondary school teachers that participated in e-learning during COVID 19.

Table 2: Schools of Respondents

Name of school	Local Government Area	Number of Teachers	Percentage
International Unity School Edjeba	Warri South	52	41.26%
Alvina High School Effurun,	Uvwie	17	13.49%
Mother of Redeemer Catholic School, Effurun.	Uvwie	20	15.87%
Nehemiah International School Okuokoko	Okpe	13	10.31%
James Welch Grammar School, Emevor	Isoko South	10	7.93%
St. Theresa Girls Grammar School Ughelli	Ughelli South	14	11.11%
Total		126	100

Source: Office of the school Administrators understudy, 2020.

Table 3: Classes of Teachers in e-learning during COVID-19 Lockdown

Name of school	Class Taught	Frequency
International Unity School, Edjeba	JSS 2	15
	JSS3	17

	SS 2	10
	SS 3	10
Alvina High School Effurun,	SS 1	10
	SS 2	7
Mother of Redeemer Catholic School, Effurun.	JSS 2	4
	JSS3	6
	SS 2	6
	SS 3	4
Nehemiah International School Okuokoko	JSS 2	3
	JSS3	4
	SS 2	3
	SS 3	3
James Welch Grammar School, Emevor	JSS 2	3
	JSS3	3
	SS 2	1
	SS 3	3
St. Theresa Girls Grammar School Ughelli	JSS 2	5
	JSS3	4
	SS 2	2
	SS 3	3
Total		126

Source: Office of the school Administrators understudy, 2020.

Table 3 reveal the classes of teachers with JSS 3 having the highest response rate of 34(26.98%) followed by SS3 response rate of 23(18.25%). Could this be attached to the fact that the above classes are preparing for external examinations.

Table 4: Subject Taught by Teachers in e-learning during COVID-19 Lockdown

Name of school	Subject Taught	Frequency
International Unity School Edjeba	Mathematics	6
	Physics	3

	English Language	6
	Social Studies	3
	Biology	3
	Agriculture Science	3
	Geography	3
	Basic/Integrated Science	3
	Basic Technology	3
	Lit-in-English	3
	Civic Education	4
	Home Economics	3
	Chemistry	3
	Health Education	3
		3
Alvina High School Effurun,	Mathematics	3
	Physics	3
	English	3
	Biology	2
	Agriculture Science	1
	Geography	1
	Chemistry	2
	French	1
	CRS	1
Mother of Redeemer Catholic School, Effurun.	Mathematics	3
	Physics	3
	English	2
	Biology	2
	Agriculture Science	2
	Geography	1
	Chemistry	2
	Lit in English Lang	1

	French	2
	CRS	2
Nehemiah International School Okuokoko	Mathematics	2
	Physics	2
	English	2
	Biology	1
	Agriculture Science	1
	Geography	1
	Chemistry	1
	Lit in English Lang	1
	French	1
	CRS	1
James Welch Grammar School, Emevor	Mathematics	1
	Physics	1
	English	1
	Biology	1
	Agriculture Science	1
	Geography	1
	Chemistry	1
	Lit in English Lang	1
	French	1
	CRS	1

St. Theresa Girls Grammar School Ughelli	Mathematics	2
	Physics	2
	English	2
	Biology	1
	Agriculture Science	1
	Geography	1
	Chemistry	2
	Lit in English Lang	1
	French	1
CRS	1	
Total		126

Source: Office of the school Administrators understudy, 2020.

Table 4 reveal that mathematics had the highest response rate of subject 17(13.49%) followed by English Language -16(12.69%).

Table 5: Media used by Teachers for participation in e-learning

Media used for e-learning	Frequency	Percentage
WhatsApp	66	52.38
Zoom	20	15.87
Edmodos	14	11.11
School Website	9	7.1
Alvinas VLE	17	13.49
Total	126	100

Source: Office of the school Administrators understudy, 2020.

Table 5, shows that the majority of the teachers used WhatsApp to teach pupils/students in e-learning during the pandemic period with 66(52.38%) and followed by Zoom with 20(15.87%). It could deduce that WhatsApp was dominated by teachers in e-learning participation.

Table 6: Ownership of phone used for participation in e-learning during COVID-19

Ownership of phone used for e-learning	Frequency	Percentage
My Own	111	88.09%
My spouse's phone	9	7.14%
My children) phone	6	4.76%
Total	126	100

Source: Office of the school Administrators understudy, 2020.

Table 6 reveals that teachers used their own phone for participation during e-learning which attracted 111(88.09%) and followed by 9(7.14%). It could be deduced that majority of the teachers have smartphones.

Table 7: Learning Materials/Resources in which teachers delivered materials to pupils in e- Learning

Materials which teachers delivered to pupils in e-learning	Frequency	Percentage
Timetable	78	61.90
Recorded audio/voice lectures	32	24.39
Recorded video lectures	126	100
Assignments	124	98.41
Corrections	50	39.68

Source: Office of the school Administrators understudy, 2020.

Table 7 shows that recorded video lectures attracted the highest responses of 126(100%) and followed by assignments with 124 (98.41%). It could be deduced that recorded video lectures could be played several for pupils to understand the lessons taught by teachers at their free time.

Table 8: Formats of materials/resource/presentations used by teachers in e-learning

Formats of materials Pupils received from teachers during e-learning	Frequency	Percentage
Recorded voice teaching	50	39.68%
Recorded video teaching	126	100%

Teachers' written notes/assignments	113	89.68%
Typed lecture notes/assignments	75	59.52%
Plain social media texts	10	7.93%
Pictorial/images	80	63.49%

Source: Office of the school Administrators understudy, 2020.

Table 8, shows that recorded video teaching and teachers' written notes/ assignments were mostly used by teachers. It could be said that teachers used recorded video to teach pupils in e-learning during the pandemic.

Table 9: Teachers respond to Pupils' assignments/ seeks further explanation

Teachers respond to pupils' assignments/ further explanation	Frequency	Percentage
Posting worked assignments to pupils' personal, social media account who then marked and provided feedback	90	71.42%
Calling pupils on the phone for an explanation	30	23.80%
Going to the school to deliver and receive materials/responses to pupils	126	100%
Allowing pupils to call me for explanation	126	100%
Providing answers on school website	17	13.49%

Source: Office of the school Administrators understudy, 2020.

Table 9, shows that going to school to deliver receive materials / allowing pupils to call teachers for explanation attracted the highest response rate of 126 (100%) and followed by posting worked assignments to pupils' personal, social media account who then marked and provided feedback 90 (71.42%). It could be said that e-learning in Nigeria is still in the infant stage unlike the developed countries where submission of assignments, examinations and instant scores/results are done with a twinkle of an eye.

Table 10: Problems Teachers encountered with e-learning

Problems teachers encountered with e-learning	Frequency	Percentage
Not always having access to the phone for the e-learning	50	39.68%
Not having data most times to access e-learning platform	40	31.74%
Lack of software to download learning materials	100	79.36%

High cost of data	126	100%
Slow internet signal	80	63.49%
The exercise not interactive	80	63.49%
Slow delay in receiving completed assignments from students	78	61.90%
My school did not provide special allowance/honorarium for the e-learning	50	39.68%
Poor coordination/management of the exercise	100	79.36%
Difficulty in posting/downloading course/learning materials	78	61.90
Occasional unavailability of internet signal	120	95.23

Source: Office of the school Administrators understudy, 2020.

Table 10, shows that high cost of data and occasional unavailability of internet signal had the highest and higher response rates. It could be deduced that high cost of data and occasional unavailability of internet signal have been bottlenecks affecting e-learning during pandemic in Delta State, Nigeria and thus this will cause setback in e-learning process in Nigeria.

Discussion of findings

The findings revealed that teachers in International Unity School Edjeba attracted the highest, followed by teachers in Mother of Redeemer Catholic School, Effurun. This is in line with Goh and Sandars (2020) who pointed out that teachers' worldwide, being deeply involved in the current tremendous shift towards e-learning, have to adapt to the current major educational challenges.

The study has revealed that classes taught by teachers in e-learning during COVID-19 are from primary 2 to senior secondary three (SS3) and that majority of the subjects taught by respondents include mathematics, English language, physics, integrated science, basic technology, chemistry and civic education. The findings in the study revealed that WhatsApp and Zoom were used by teachers for participation in e-learning during the pandemic. This is supported by Fontanillas, Carbonell, Catusus (2016) who asserted that the use of technological tools such as a Webinar, WhatsApp, Zoom, Google among others will enable schools to establish the active process of e-learning. On the contrary, Yates, Starkey, Egerton, and Flueggen 2020) stated that when Zoom platform is used in e-learning it is 'felt unnatural' because only one

person could talk and teachers dominated and they further stated that ‘No one talks in online classes except the teacher’, classmates turned off videos and microphones and didn’t participate: ‘people tended to not speak (be muted) or show their faces, therefore, it was hard to communicate or interact with them’, and some students simply did not attend.

A larger number of teachers who participated in e-learning during COVID-19 have their personal phones this is in line with Kearney Schuck, Burden and Aubusson (2012) who asserted that teachers were using mobile devices such as smartphones, tablets and laptops for teaching. The findings also revealed that recorded video lectures had the highest response rate. This is in accordance with Rasmitadila, Aliyyah, Rachmadtullah, Samsudin, Syaodih, Nurtanto and Tambunan (2020) who asserted that some teachers are of the view that instructional videos were mostly one of the most accessible media used by pupils at any time and students could easily understand the subject matter. The findings revealed that recorded video teaching and teachers’ written notes/ assignments were mostly used by teachers. This is in accordance with Kim (2020) who asserted that they are different functions and tools of many video communication platforms which children can benefit from e-learning when teachers use them appropriately.

The study shows that teachers going to school to deliver/receive materials and calling pupils on the phone for an explanation attracted the highest response rate followed by posting worked assignments to pupils personal, social media account who then marked and provided feedback. The findings show that the slow internet signals attracted the highest response rate followed by the high cost of data. This is in accordance with Pokhrel and Chhetri (2021) who asserted that Internet bandwidth is relatively low with lesser access points, and data packages are costly in comparison to the income of the people in many developing countries, thus making accessibility and affordability inadequate.

Summary of the Findings

Based on the findings of this study, teachers in International Unity School Edjeba, Edjeba Estate School Edjeba, Alvina High School Effurun, Mother of Redeemer Catholic School, Effurun, Nehemiah International School Okuokoko, James Welch Grammar School, Emevor and St. Theresa Girls Grammar School Ughelli in Delta State participated in e-learning during COVID-19 lockdown to keep pupils in continues learning while at home. WhatsApp was dominated by teachers for e-learning, the majority of teachers used their personal phones, video

lectures were mostly used for participation so that pupils can learn at their free time and teachers going to school to submit received materials to pupils for corrections/assessment. The purpose of this study is to enable teachers that participated in e-learning to improve more and teachers that do not participate in e-learning should emulate those that participated in case of subsequent occurrence.

Conclusion

The study has revealed e-learning is essential when there is locked down, for continuous teaching and learning process and the medium used for learning are WhatsApp, Zoom, Edmodos among others.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Since the teachers had issues with slow internet signals Secondary School Proprietors should ensure that they liaise with organisations in charge of various networks on how to ensure that they boost their signal transmission and ensure that additional token for data are added to remuneration of teachers.

Suggestion for Further studies

1. Further research should be conducted on teachers' experience in e-learning during COVID - 19 in the South-West region, Nigeria.
2. Teachers in Delta State should increase the extent to which they collaborate on e-learning platforms.

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