9

E-LEARNING FOR QUALITATIVE EDUCATION AND SUSTAINABILITY IN SECONDARY SCHOOLS IN NIGERIA

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Abstract

This paper examined e-learning for qualitative education and sustainability in secondary schools in Nigeria.The study employed a descriptive survey research design. The population of this study was 247 principals and 3,102 teachers from 190 public secondary schools in Abia State. A sample of 378,30 principals and 247 teachers 190 secondary schools in Abia State.Multi stage sampling technique was applied in the selection of the samplefrom the three education zones of Abia State.A self structured questionnaire was used for data collection.The instrument was validated and the reliability index of 0.70 was obtained using test retest reliability method.Two research questions guided the study.The findings of the study revealed that the factors that the that militated against students' compliance with e-learning include poor budgetary allocations to the education sector, illiteracy of many parents, erratic/epileptic power supply, poor infrastructures in the schools, due to lack of facilities in the schools' students were not taught the use of online in learning, several families are poor and do not have computers /laptops in their homes, many teachers are not ICT compliant and cannot give what they don't have, etcetera.The findings also showed that the solutions to students'non- compliant to e-learning in secondary schools are that the Government should increase budgetary

allocations to 26% recommended by UNESCO, compulsory in-service training and retraining through seminars, symposia, workshops, conferences) for teachers on how to operate computers, among others.It was recommended that the government should increase budgetary allocation to the education sector, embark on a massive computer literacy training programme for teachers and learners at all levels eccetera.

Keywords: E-learning, Qualitative Education, Sustainability,Secondary Schools.

E-learning is not a new phenomenon in promoting education globally. E-learning is one of the most significant educational innovations driven by an expanding array of technology-enabled platforms that offer potential learners an alternative and innovative learning environment compared with traditional learning and, thus, represents IT-based innovation in education (Bates, 2007). Presently, many institutions in Nigeria are using it to promote education in this period of Coronavirus pandemic. E-learning has become a necessity in all the levels of education in general and secondary education in particular the whole world. It is the use of electronic technology to deliver education and training applications, monitor learners'performance and, report learners' progress. According to Hedge and Hayward (2004), e-learning is an innovative approach for delivering electronically mediated, well-designed, learner-centered and, interactive learning environments to anyone, anyplace, anytime by utilizing the internet and digital technologies in concern with instructional design principles. This is simply learning with the use of computers. It also means online ways of acquiring knowledge through the internet or offline –CD-ROM. This involves the use of Internet Explorer/Navigator. It may be in form of Audio, Visual, and or Audio/Visual. The convergence of the internet and learning or Internet-enabled learning is called e-learning. The applications and processes of e-learning include computer-based learning, web-based learning, virtual classroom and, a digital collaboration where contents are delivered via the internet, intranet/extranet, audio and or videotapes, satellite TV and, CD-ROM (Islam 1997) as cited in Ajadi,Salawu & Adeoye,(2008).

According to UNDP, quality education plays a significant role in a global society because it promotes equality, creates more peaceful societies, provides jobs, advanced technologies, and power to boost economies. (UNDP, 2019).There is the need for governments to make education their priority to accomplish their policies not only in the

paper but also in practice. Quality education among other things requires adequate e-learning infrastructure and teacher training for sustainability.

Sustainable development is to improve the quality of life, to satisfy the basic life needs and enjoy a better quality of life without compromising the quality of life of future generations (Fasokun, 2010). Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs (Gordon,2020).Therefore, meeting e-learning needs of secondary schools in Nigeria for quality education and sustainability is paramount.

COVID-19 also known as coronavirus is a pandemic that ravaged the World. It has disrupted the global educational system as all the countries in the world have at one time or the other temporarily closed all the educational institutions from pre-primary to tertiary institutions in an attempt to contain the spread of the pandemic. According to the report by UNESCO (2020), the closure of educational institutions has impacted over 91% of the world's student's population. This has resulted in serious setbacks to the educational calendar in the whole world. Every level of education felt the effect of this pandemic. Other sectors of the economy felt the effect too. Before the pandemic, some of the institutions from pre-primary to the universities were at the point of preparing for the examination, admitting of freshmen, beginning of a new semester, etcetera. Educational institutions around the world including Nigeria started looking for ways to cope and adapt to academic changes as a result of this pandemic. In its response to COVID-19, the Federal Ministry of Education sought to mitigate the immediate impact of the pandemic by using online and offline platforms, television, radio and, take-home materials to keep children learning. Hence, the choice of the use of e-learning as an alternative learning method. These secondary schools adopted the use of information and communication technology tools to facilitate learning during this pandemic. Many e-learning platforms were utilised by secondary schools although these platforms are inexhaustive. They include Zoom, Microsoft teams, google hangout (meet), skype, Bamboo learning, google classroom, Docebo, WIZIQ, Adobe captivate, Elucidat, Blackboard learn amongst others (Adeoye,Adanikin & Adanikin, 2020).

The importance of e-learning as the most preferred platform to learn during the global pandemic periods known as the COVID- 19 cannot be over-emphasised. According to Hardaker and Singh (2011), the internet is a perfect tool of learning that offers flexibility and expediency to learners at the same time offering endless opportunities for innovative teaching. The adoption of the e-learning system for secondary schools will enhance the efficiency of knowledge as both students and teachers will have easy access to a large amount of information within the global village. In most secondary schools there is a clash in the timetable. The e-learning system will completely reduce the issues of clash in the

timetable for lessons as students can easily take the lessons online without any disruption at their convenience. Also, e-learning affords students and teachers the opportunity to participate in the class in their comfort zone with the basic amenities they need when compared to the traditional teaching method where sometimes these basic amenities are unavailable for conducive learning(Adeoye et al,2020). E-learning can be better than face-to-face learning, the quality of interaction and timely feedback is superior, with good course design can untangle the geographical limitations to education (Chen & Yang, 2006). Arkorful and Abaidoo (2014) opine that the cost-benefit of e-learning in training students is lesser than that of physical (face-to-face) contact after considering some factors such as the number of students trained; distance to be traveled and time of training. Guragain (2016) also posits that the value of face-to-face class contact content development, distribution, and maintenance cost is exclusively high as compared to e-learning which is of lower cost. All these shows that adoption of e-learning for quality education and sustainability tends to solve educational challenges especially at a time such as the COVID-19 pandemic.

But despite the numerous benefits of the e-learning platforms available, not many Nigerian secondary schools have embraced it. Most secondary schools are unable to fully utilize e-learning or get full advantages of it. This failure has hindered most teachers in using innovative teaching methodologies in delivering their lessons. Only the children of the rich parents who could afford the data benefitted from the e-learning online education provided for students who registered for the West African Senior School Certificate Examination(WASSCE) and National Examination Council (NECO) to do revisions.A lot of challenges militated against the use of e-learning in Nigerian secondary schools during this pandemic as it was the only medium available for learning. The result was that many secondary schools did not embrace e-learning for their revisions during the global COVID-19. In Nigeria, some of the factors include poor budgetary allocations, corruption, and unpreparedness to embrace e-learning by my secondary schools. The budgetary allocation does not promote e-learning in secondary schools and that was the reason the public secondary schools did not embrace e-learning during the lockdown. Supporting the above,(Ahmed, 2010) opine that its adoption is rather too low because of the high illiteracy rate and poor educational funding by the federal and state government.A ten year (2010-2019) budgetary allocation to the Nigerian education sector as shown in Table 1 has been very poor and below the 26 percent recommended by UNESCO for developing countries like Nigeria.

Table 1: National Budgetary Allocation for Education (2010-2019)

Year	Total National Budget	Education Budget	Education % of Total
2010	4.0trn	293bn	7.19
2011	4.22trn	393bn	9.31
2012	4.74trn	453bn	9.15
2013	4.92	499bn	10.15
2014	4.69trn	494bn	10.54
2015	4.49trn	434bn	10.71
2016	6.06trn	431bn	7.92
2017	7.44trn	551bn	7.41
2018	8.60trn	605.8bn	7.04
2019	8.92trn	620.5bn	7.02

Source: Udoma, 2018.

Barriers such as poor awareness, poor infrastructures, and abysmal management commitment to interactive knowledge environment (Bukhari, 2010) have been hindering many teachers from using innovative teaching methodologies in delivering lessons. These findings confirm Ilechukwu (2013), which revealed that the greatest challenges for effective utilization of e-learning by teachers include the unwillingness to change to the new method of computer literacy among teachers and students.Aboderin and Kumuyi (2013) looked at the problems and prospects of e-learning in curriculum development and implementation in secondary schools in the Ondo State of Nigeria. Specifically, they examined the availability of e-learning tools for curriculum implementation, the extent to which it was applied by teachers, strategies, and prospects of e-learning in secondary schools. The finding revealed that there were shortages of e-learning tools and the few ones used were not adequately used. On the strength of these, the investigators advised governments to embark on massive in-service training and retraining (seminars, symposia, workshops, and conferences) for teachers on how to operate computers. Similarly, Aboderin (2015) investigated the challenges and prospects of e-learning at the National Open University of Nigeria, and while the study recognized that e-learning influences students' ICT competence, it found that the major challenges included lack of enough computers, shortage of internet facilities, students' lack of access to e-learning facilities and tools, high cost of software and erratic power supply. Similarly, Asogwa (2011) found that the major challenges for optimizing e-learning are lack of requisite skills, the teachers are not as skilled and thorough in the understanding, operation, and applications of the packages as they are supposed to be. Many teachers are

still not good at powering their laptops, composing and sending e-mails, accessing emails, attaching files, and those other peripheral issues.

In a study on factors that have the most influence in instructor participation in an e-learning process, Ahmed (2013) found that because of the immaturity of e-learning systems in developing countries, instructors do not see the importance of e-learning. The poverty of many parents also hindered many students from participating in the online lessons. A study by Ryan and Adams (2007) reveals that socioeconomic factors have a large, pervasive, and persistent influence over school achievement.All these are aginst quality education and sustainability.

On the solutions to e-learning the role of ICT in curriculum implementation is recognized by the Nigeria National Policy on Education (FRN, 2013) where it stated that the government shall provide facilities and necessary infrastructures for the promotion of ICT and e-learning. The findings agree with Sundarajan (2005) as cited in Shraim and Khlaid (2010) that teachers should have adequate training for computer education. Also, that necessary facilities and e-learning materials should be provided for effective curriculum implementation in secondary school. Training and re-training of teachers are very important. Teacher encouragement and timely responses seem to be significant to enhance learners' motivation and interaction (Vaughan, 2007). Agboola (2006) found that training and confidence were of practical importance in predicting both the adoption of e-learning and readiness for it. For e-learning implementation to succeed, there is a need to acknowledge the importance of assessing the readiness of organizations, teachers, and learners to adopt this learning style (So & Swatman, 2006).An e-learning readiness evaluation can help an organization to identify factors that are necessaryto ensure that the design of e-learning strategies are tailored to learners' needs (So & Swatma,2006) and to examine how teachers and learners come to accept and use an e-learning approach Thowfeek and Hussin (2008) also identified several factors with the potential to influence the acceptance of e-learning by Sri Lankan higher education instructors: students' and instructors' readiness, which included awareness, training, and confidence; the need for e-learning, that is, the type of program or course suitable for this mode; infrastructure; institutional support; motivation and incentives; and the e-learning system itself.

Many studies have been completed on e-learning in secondary schools but none have been done concerning COVID-19 and e-learning. Therefore, this study investigated e-learning for quality education and sustainability in secondary schools in Nigeria.

E-Learning for Qualitative Education and Sustainability in Secondary Schools in Nigeria -
Grace Uzaru Onwuchekwa and Sebastine Ajuru Ugwuanyi

Statement of the Problem

E-learning offers students considerable benefits including increasing access to learning opportunities, the convenience of time, and place, making available a greater variety of learning resources, improve opportunities for individualized learning, and the emergence of more powerful cognitive tools (Pierre, 1998 as cited in Ajadi, et al (2008). The closure of Nigerian schools amid the COVID-19 pandemic has led to students remaining at home. With an education system already burdened with low participation and learning achievements, the closure increases the challenge for students' education and has the potential to set back recent gains in bringing students back to school if adequate action is not taken. States in the federation contextualized this, with the Federal Ministry of Education releasing a schedule of radio and TV lessons for students in public schools including online education globally. But many students could not participate in the e-learning training. Also, many students already in their final year like senior secondary school students who were ready for their final examination missed the online education. The problem of this study put in question type are: What are the factors that militated against students' compliance with e-learning for quality education and sustainability in secondary schools in Nigeria? What are the solutions to these problems? These are the concern of this study.

The Purpose of the Study

The purpose of the study was to investigate e-learning for qualitative education and sustainability in secondary schools in Nigeria. Specifically, the study sought to:
1.find out the factors that militated against students' compliance with e-learning for qualitative education and sustainability.
2.find out the solutions to students' compliance with e-learning for qualitative education and sustainability in secondary schools.

Research Questions

1. What are the factors that militated against students' compliance with e-learning for qualitative education and sustainability?
2. What are the solutions to students'non- compliance with e-learning for quality education and sustainability in secondary schools?

Methodology

The study employed a descriptive survey research design. The study covered all the one hundred and ninety (190) government-owned secondary schools with two hundred and forty-seven (247) principals and 3,102 teachers in all the 17 Local Government Areas in the

three education zones of Abia State of Nigeria. A sample of 378 respondents,30 principals, and 348 teachers was selected through multi-stage sampling techniques. The data collection instrument was a self-structured administered four-point scale questionnaire titled" E-Learning for Qualitative Education and Sustainability Questionnaire (EQESQ)" which consisted of two sections. A 15 item questionnaire developed by the researcher, validated with a reliability index of 0.70 was used to elicit responses from respondents. The questionnaire was structured on a four-point modified Likert Scale of Strongly Agree(A), Agree(A), Disagree(D), and Strongly Disagree(SD) respectively.350 questionnaires were accepted while 28 questionnaires were rejected as a result of inconsistencies. Data collected from the respondents were decoded and mean scores were used to answer the research questions. Any item with a mean below 2.50 is regarded as disagreed. While responses with a mean of 2.50 and above are regarded as agreed.

Results
Research Question One
What are the factors that militated against students' compliance with e-learning for qualitative education and sustainability in secondary schools?

Table 1: Teachers Responses on the Factors that Militated against Students' Compliance with E-learning for Qualitative Education and Sustainability

S/N	Questionnaire Item	Mean Score	Rank Order
1	Poor budgetary allocations to education sector.	3.34	1st
2	Poor Infrastructures in the schools.	3.09	4th
3	Many teachers are not ICT compliant and cannot give what they don't have.	2.86	7th
4	Due to lack of facilities in the schools students were not taught the use of online in learning.	3.06	5th
5	Several families are poor and do not have computers /laptops in their homes.	2.94	6th
6	Many parents due to poverty could not buy data for online learning.	2.77	9th
7	Many teachers are not ICT compliant and cannot give what they don't have.	2.85	8th
8	Illiteracy of many parents.	3.22	2nd
9	Erratic/epileptic power supply.	3.16	3rd

N=350

Table 1 shows that all the items have a mean score above 2.50 which indicates that the respondents' agreement that the factors that militated against students compliance with e-learning for qualitative education and sustainability include poor budgetary allocations to the education sector, illiteracy of many parents, erratic/epileptic power supply, poor infrastructures in the schools, due to lack of facilities in the schools' students were not taught the use of online in learning, several families are poor and do not have computers /laptops in their homes, many teachers are not ICT compliant and cannot give what they don't have, many teachers are not ICT compliant and cannot give what they don't have and many parents due to poverty could not buy data for online learning respectively.This showed that all the respondets agreed that all the factors militated against students' compliance with e-learning for quality education and sustainability.

Research Question Two
What are the solutions to students'non- compliant to e-learning for qualitative education and sustainability in secondary schools?

Table 2: Teachers Responses on the Solutions to Students' Non- compliant to E-learning for Qualitative Education and Sustainability in Secondary Schools

S/N	Questionnaire Item	Mean Score	Rank Order
10	The Government should increase budgetary allocations to 26% recommended by UNESCO.	3.37	1st
11	Procurement of e-learning facilities.	2.97	5th
12	Compulsory in-service trainingand retraining through seminars,symposia,workshops,conferences) for teachers on how to operate computers.	3.29	2nd
13	Students should be allowed access to e-learning facilities.	3.06	4th
14	There should be uninterrupted electricity supply to schools.	2.91	6th
15	Reorietation of students' attitude towards the seriousness of e-learning in schools.	3.14	3rd

N=350

Table 2 indicates that all the items have a mean score above 2.50 which shows that the respondents agreed that the solutions to students'non- compliance with e-learning for quality education and sustainability in secondary schools include that the Government should increase budgetary allocations to 26% recommended by UNESCO, compulsory in-service training and retraining through seminars, symposia, workshops, conferences) for teachers on

how to operate computers, reorientation of students' attitude towards the seriousness of e-learning in schools, students should be allowed access to e-learning facilities, procurement of e-learning facilities and there should be uninterrupted electricity supply to schools indicating agreement by all the respondents.

Discussion

Teachers responses showed that the factors that the that militated against students' compliance with e-learning for qualitative education and sustainability include poor budgetary allocations to the education sector, illiteracy of many parents, erratic/epileptic power supply, poor infrastructures in the schools, due to lack of facilities in the schools' students were not taught the use of online in learning, several families are poor and do not have computers /laptops in their homes, many teachers are not ICT compliant and cannot give what they don't have, many teachers are not ICT compliant and cannot give what they don't have and many parents due to poverty could not buy data for online learning respectively. This is in line with Aboderine Kumuyi's (2013) finding which revealed that there were shortages of e-learning tools and the few ones used were not adequately used. This is also in agreement with Aboderin (2015) investigation that the major challenges included lack of enough computers, shortage of internet facilities, students' lack of access to e-learning facilities and tools, high cost of software, and erratic power supply. In the same vein, Asogwa (2011) found that the major challenges for optimizing e-learning are lack of requisite skills, the teachers are not as skilled and thorough in the understanding, operation, and applications of the packages as they are supposed to be. These findings confirm Ilechukwu (2013), which revealed that the greatest challenges for effective utilization of e-learning by teachers include the unwillingness to change to the new method of computer literacy among teachers and students.

The findings of this study also revealed that the solutions to students'non-compliant to e-learning in secondary schools are that the Government should increase budgetary allocations to 26% recommended by UNESCO, compulsory in-service training and retraining through seminars, symposia, workshops, conferences) for teachers on how to operate computers, reorientation of students' attitude towards the seriousness of e-learning in schools, students should be allowed access to e-learning facilities, procurement of e-learning facilities and there should be uninterrupted electricity supply to schools. This is tandem with The findings agree with the findings of Sundarajan (2005) as cited in Shraim and Khlaid (2010) that teachers should have adequate training for computer education. This agrees with Agboola (2006) who found that training and confidence were of practical importance in predicting both the adoption of e-learning and readiness for it. This is in agreement with

Vaughan (2007) that teacher encouragement and timely responses seem to be significant to enhance learners' motivation and interaction.

Conclusion

The study examined e-learning for qualitative education and sustainability in secondary schools in Nigeria. The factors that militated against students compliance with e-learning in secondary schools include poor budgetary allocations to the education sector, illiteracy of many parents, erratic power supply, poor infrastructures, due to lack of facilities in the schools' students were not taught the use of online in learning, poverty of parents, many teachers are not ICT compliant etcetera. The solutions to the challenges of e-learning in secondary schools range from an increase in budgetary allocations, compulsory in-service training and retraining of teachers through seminars, symposia, workshops, conferences) on how to operate computers, reorientation of students' attitude towards the seriousness of e-learning in schools, allowing students free access to e-learning facilities, procurement of e-learning facilities to uninterrupted electricity supply to schools among others.

Recommendations
Based on the findings of this study, the underlisted recommendations are made:
1. The government should increase budgetary allocation to the education sector.
2. The government should embark on a massive computer literacy training programme for teachers and learners at all levels. This should be accomplished through in-service training of teachers, workshops, seminars, and conferences. Training would help teachers on the use of the internet would help them do their job effectively.
3. Schools should be well equipped with online gadgets so that children from poor homes can learn in schools.
4. Parents should be mass literacy education on the importance of e-learning.
5. Access to e-learning should be made free to enable children of poor parents to participate.
6. Non-governmental organizations should help in providing e-learning infrastructures to schools.
7. The government should provide digital libraries in secondary schools. Each digital library should have a server for storage, retrieval, uploading, and downloading of information.

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