

Issues and Challenges in the Use of e-learning Resources for Quality Education Delivery in Post-Covid 19 period: A Case Study of Secondary Schools in Zamfara State

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Abstract

E-learning almost abruptly became a crucial learning strategy for educational institutions during the global COVID-19 pandemic. The secondary school layer of education was receiving its first major encounter with e-learning as a sole means instructing the students for a part of nearly seven months total and partial lockdowns imposed in many countries. The Secondary Schools in Zamfara State also experimented this along with many Nigerian schools using such channels as Radio, TV and the internet and related remote learning strategies. This paper looked at the evidence of experiences of some teachers from five secondary schools within the state employing a qualitative approach. Three teachers were selected from each school (n=15) to elicit their responses on the three objectives of the paper. The responses were analyzed using thematic analysis approach and the emergent themes were: 'swift switch to e-learning', 'the challenge of distant interaction', and 'darth of resources and technical support' under which the detailed findings were discussed. Recommendations were made that though avenues exist for successful development and practice of e-learning, improvement should be made on staff training, equipment, Internet connections to address the issues and challenges raised by the respondents

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I. Introduction

The pace at which technological inventions have been unfolding in recent history has shaped all spheres of the current socioeconomic reality and introduced new and greater demands on the socioeconomic actors and systems. Within the Education system in particular, these demands have catapulted the introduction and utilization of a number of technologies in terms of tools, media or resources alike. Academic inquiry has demonstrated how the entire elements of the education ecosystem draw on these inventions for the sustenance of the system and against its more improved performance. Teachers, students, administrators, parents and other education stakeholders have at various degrees been shown to rely on technology for Educational delivery, instruction, assessment and administration. Similarly, UNESCO (2004) asserts the crucial need to focus on the importance of lifelong learning and upgrade knowledge and skills continuously, to think critically and to inspire creativity and innovation so as to adapt to global change. (Garland & Tadeja 2013)

At the close of the 2nd decade of 21st century the Covid-19 pandemic which imposed global lockdowns and social distancing have represented the apex of global resort to technology for information mediation and delivery. Education here as well made remarkable utilization of technology tools, media and resources to a remarkable extent. Bello (2021) observed that the COVID-19 pandemic and its accompanying circumstances are one major world incident that has caused an unprecedented swift and dynamic turn toward a wider embrace of e-learning even in traditionally unusual educational quarters. This implies that though the Education system in Nigeria at the higher institutions level have long been used to e-learning deliveries, it is the

incidence of Covid 19 that ushered a period in which pre-tertiary Education in Nigeria have come to largely imbibe e-learning. Particularly, the Federal Ministry of Education in Nigeria in line with the global trend resorted to delivering learning content to pre-tertiary students through e-learning first by Educational radio and television and then by web. In culmination, the federal government eventually launched a dedicated website named inspire.education.gov.ng By specifications, the website has at its launch in 2021 been adjudged to be the greatest open source national e-learning repertoire directed to secondary school teachers And learner's. over it contained 4,000 video lessons for elementary students, 7,000 video lessons for secondary students, and 4,000 audio lessons for secondary audience. The is in addition to many other e-learning platforms such as WAEC e-learning and so forth. (Bello ;2021)

The implementation of e-learning to a wide scale in pre-tertiary schooling particularly secondary schooling therefore represent a shift in teaching and learning paradigm in many African countries like Nigeria for a lot of teachers in the subsystem. These innovations were meant to improve access to advanced educational experiences by allowing students and teachers to participate in remote learning communities and to improve quality and effectiveness of education by supporting a collaborative learning process. Particularly, many developing countries trying expansion of technology to new areas are, however, faced with numerous challenges such as technical and organizational problems and the readiness of teachers and students are concerned (Andersson&Gronlund, 2009; Paschal &Mkulu 2020)

Educational development of this type in Nigeria are described as a challenging experience due to this newness. For many years, the educational system at the tertiary level has internalized e-learning systems with the establishment of national open university of Nigeria, NOUN in the mid 2000s. Ever since the e-learning penetration has kept deepening even further. However the secondary school teacher and student have largely been kept aloof from the development. Nigeria has a clear educational policy which hinged on the integration of the individual into a sound and effective citizen with equal educational opportunities to all Nigerians. In furtherance of this, Federal Government of Nigeria and some state governments established many means by which secondary school teachers and students can access e-learning resources and systems. (Chibueze&Chukwuji 2021)

Most of these resources are deliverable through the digitalization of formal school curriculum, in this case, the secondary schools. This is as it is established to support teaching and learning in the schools through provision of necessary facilities in quantities and qualities enough to achieve educational outcomes. Various studies have shown that most secondary have no specific elearning platform serving there teaches and students as obtains in tertiary schools (Fayomi Ayo, Ajayi&Okorie 2015) and that these schools do not have well equipped and functional libraries to serve needs of their teachers and students despite that many of these schools have qualified teachers However research have also shown that that provision of open access to eLearning resources nearly replaces this deficit (Chibueze&Chukwuji 2021; Sharifabadi 2006).

Whereas the research literature on e-learning has grown tremendously in recent years, much of it focuses specifically on tertiary education and relatively little has been published on its adoption to primary and secondary schools. This provides premise for this paper to investigate the opportunities and challenges of the e-learning as a new paradigm for secondary education in zamfarastate from the perspective of teachers. By doing so this inquiry will help Education stakeholders to identify important and strategic issues facing the relative the transition to e-learning or its utilization by secondary teachers and beyond.(Moustakas& Robrade;2022)

E-learning has largely been recognized as an important means to enhance the accessibility and improve quality of the teaching-learning process (Appana, 2008). It is viewed as a collection of tools, media and resources which provides opportunities for maximization and penetration of educational content to normal and disadvantaged students or those who are unable to attend classes due to physical, social or economic constraints (Vaughan, 2007). Other part of literature emphasize the flexibility of e-learning in terms of elimination of space and time constraints. It was also shown to improve the quality of learning, prepare students better for a knowledge-based society, provides lifelong learning opportunities and supports critical thinking skills, problem-solving and so forth. Self-paced and real-time are two salient attributes of e-learning that warrant its adoption to large scale.(Moustakas&Robrade2022; Yusuf & Al-Banawi 2013)

Another part of the e-learning literature suggests its recognition as a distinct teaching-learning paradigm with many benefits over the conventional one right before the Advent of Covid-19. critiqued the rigid nature of physical classroom and of preferred e-learning over it in their study giving that the latter provides the opportunity to pursue learning in an individualized and self-paced way; the learner can instantly raise queries and doubts, receiving feedback without much time waste, which might not be the case in the physical classroom; and e-learning makes it easier for slow learners to participate, by allowing them more response time. Additional accelerated learning was also made easier by e-learning for exceptional learners. Moreover, session recordings are readily available to students to revisit them as required. In order to reap these benefits. Clifford (1999). stressed that students develop a range of new skills such as managing their own pace, becoming autonomous and taking greater responsibility for their own learning in the e-learning paradigm. (Shraim&Khlaif, 2010)

The outbreak of Covid-19 led to even greater embrace of e-learning not only at theoretical levels but also at practice levels. Extant literature shows that globally e-learning was experimented to convey Educational content at various levels of schooling including secondary. These practices raised new issues and revealed fresh challenges regarding e-learning. A study conducted by Maatuk, Elberkawi, Aljawarneh, Rashaideh&Alharbi (2022) investigated The COVID-19 pandemic and E-learning: challenges and opportunities. The findings revealed the issues of unusually high internet cost, low teachers' and students' preparedness and technical constraints as major issues. These issues are viewed by many researchers as regurgitation of the e-learning problems of the old . However, further argued that the swift switch to e-learning occasioned by Covid-19 brought about a feeling of distance even though it was initially believed to reduce one. They further elaborated that pre-recorded lectures or slide-based presentations greatly limited student motivation, engagement with the teachers as well as satisfaction. (Bello, 2021;Moustakas&Robrade; 2022)

Another aspect raised by the literature is lack of adequate training in delivering e-learning which makes the development and implementation of courses difficult for the instructors. Instructors, for example, often receive no or only little training before being asked to deliver an online course. Further challenges can include the lack of measurable strategic goals, the need to license expensive software, and the potential risks for disruption connected to the increasing dependency on technology as a medium citing power outages, natural disasters, hacking, etc. (Ersin&Atay 2021; Marshall, S. 2020)

Thus the the researchers acknowledged that e-learning was already in use before the pandemic and various challenges were associated with it but the sudden shift to it occasioned by the COVID-19 pandemic served to resurface and augment these challenges. For example, Aung &Khaing as cited in Moustakas&Robrade (2022) identified inadequate of technological resources, poor internet quality, and a lack of information communication technology (ICT) knowledge have been important barriers, especially in developing countries. On a final note, issues concerning adequate online interaction among the students as well as between them and their teachers pose a significant issue for online learning during the pandemic (Oluwatoyosi, Adebajo&Adewumi 2022).

Secondary Education in Nigeria and in Zamfara state is equally sure to have fair share of the issues and challenges of adopting e-learning on a large scale for the first time. Bello (2021) stressed that there were Federal developed and state developed e-learning packages targeted at teachers and students in Nigerian states. Here, more theoretical postulates, the researchers have strong ground to investigate how adoption of e-learning fared in Zamfara during the period. This is especially as the adoption was used carpeted approach to both theoretically oriented subjects and practically oriented ones. Already researchers in the field of educational technology have stressed that practically oriented subjects do not always easily translate to the online setting (Luliano, Mazzilli, Zambelli, Macaluso, Raviolo, Picerno 2021)

Though the deployment of digital technologies to support learning has received considerable attention of the researchers, there is little evidence about how these technologies are used and what issues and challenges are associated with them when applied to secondary schooling. Thus, the research objectives for the current study are (1) To investigate how has the Covid-19 induced e-learning affected teaching activities of Zamfara state secondary school teachers (2) To find out the successes and challenges of using e-learning during COVID-19 by Zamfara state secondary school teachers (3) To suggest ways to improve secondary school bound e-learning for post COVID-19 period. These objectives are important to answer as, even once the pandemic fades away, e-learning is highly likely to remain integral for the use of secondary school teachers and students.

II. Methodology

To achieve the above, the experiences of some identified secondary school teachers in Zamfara state have been explored through the use of qualitative survey design with open ended questions mimicking interviews. Specifically, attention was given to experiences of teachers regarding the transition to e-learning and attempt to understand the challenges and other issues associated with these experiences. The sampling was purposive Targeting only teachers who actively engaged in e-learning during Covid-19 pandemic in Zamfara state. Additional face-to-face sessions were held with the participants for more in-depth. Three teachers were chosen each from five secondary schools namely: Zacas staff school Gusau, Muslim foundation secondary school Gusau, Government day secondary school tsafe, Zamfara state college of arts and science Gusau and school for continuing education (women) Gusau. All the respondents are permanent teachers with the schools. Very minimal amount of demographic/background questions were asked according to the need and 9 are male while 6 are female. The instrument was first piloted the with a group of teachers twice with an interval of two weeks to ascertain reliability and a reliability of 0.81 was achieved with Pearson moment correlation coefficient. The questions focused on the objectives of the research. The chosen questions reflect prevalent themes obtained in other literature that address issues to do with engagement with e-learning by teachers. Responses were kept anonymous as only codes were given to the respondents and all participants provided informed consent before starting the survey. Thematic analysis was used to analyze the data which include steps such as familiarising

with the data, generating initial codes, searching for themes, reviewing themes, and defining themes as well as assigning responses to themes.

III. Findings

The results from thematic analysis of the participants' responses is presented in this sections. These results are grouped according to the emergent themes from the responses as per the objectives of the research. The identified themes onn the final analysis are 'swift switch to e-learning', 'the challenge of distant interaction', and 'darth of resources and technical support' The three themes are deemed to provide range of possible answers to the research objectives and relevant responses presented under befitting themes.

Swift switch to e-learning

One of the emergent theme was the abrupt and sudden migration to e-learning which came to many respondents (in this case teachers) unprepared or ill-prepared. This migration was, of course, due to the unforeseen outbreak of the COVID-19 pandemic. Though many institutions in the world and in Nigeria were used to e-learning but the secondary schools in zamfara state and other Nigeria states are witnessing for the first time. The migration however did not last forever as the school have since resumed to normal but the e-learning structure and resources remain intact. This led some respondents (respondent 5) to describe the e-learning as "partial e-learning experimentation". For many teachers, this sudden shift compelled them to embark on e-teaching with little or no preparation, (respondents 3,6,7,9,12 &13). It is also viewed as trial and error situation for many teachers (respondent 1 & 11). Though some teachers reported already having some form of experience given that the training they received during their pre-service days involved some aspects of e-learning (respondents 2, 8, 9 & 10). However upon scrutiny most of this response came from teachers who graduated and were recruited recently going by their demographic responses. Some teachers also complained that "there was no enough time to prepare (respondent 5). This is seen in the light work load which is not supposed to increase during that time because the lockdown imposed required teachers to stay at home unless otherwise if the time required for teacher to prepare an e-course outspans the lesson period durations during normal times. This may also be viewed as issue of "techno-stress" which may also be perceived as added work lord. Another respondent (Code 7) cited "many mistakes".

In spite of all these, the respondents have reported excreting serious efforts to endure the change. Teachers (respondents 3, 6, 15) reported getting into studio to record audio or Video lesson as normal as presenting classroom lesson requiring little preparation for an experienced teacher. "once master your subject matter you need little preparation to go online" remarked respondent 15. "The tasks are almost the same as those in the classroom" opined respondent 6.

The challenge of distant interaction

The need for interaction between teachers and students and among teachers themselves was a serious emergent theme for the responding teachers.. The sense of alienation caused by developing or implementing e-learning away from the normal teaching learning environment seriously affected teachers resolve to teach. Some respondents made reference to discouraging terms such as demotivation and dissatisfaction (respondents 1 & 4). Another participant observed that though lessons may be delivered online but the students may suffer loss of focus and attention unlike in classroom where teacher can call his or her attention if it got lost (respondent 13). Technical issues prevent many less to do students from accessing the e-learning. Even with physical interaction some students may lag behind (respondents 4,7 & 10). "The strength of internet connections cannot support active real time interaction with the students" stated respondent 15. And as such such less data consuming approaches were preferred by many. In fact some respondents (3, 4 & 12) stated that the period of e-learning during Covid-19 lockdowns witnessed no serious interaction except for expanded usage of whatsapp application as major conveyer of lessons in addition to radio and TV recorded lessons. The only advantage is that the students may view the lessons over and over. Respondent 12 added that "in such conditions discussion is not possible like physical classroom interaction. One respondent (Code: 11) remarked that "through online lesson I am not sure my interaction with the students will be focused from their own side, distractions may be many in the student environment especially if it is home". Finally respondents 12, 13 & 15 lamented lack of prompt response to students questions. This implies that the e-learning experience was purely asynchronous.

Darth of resources and technical support

Challenges and issues in e-learning were many. some were pre-existing before the outbreak of the COVID-19 pandemic but some arose due to the abrupt nature of e-learning experimentation in secondary schools which happened on a broad scale for the first time. Shortage of equipment and limited tools, electricity shortages and outages, cost of internet data have all surfaced as part the issues. Similarly lack of technical support was viewed as discouraging. The respondents generally opine that doing away with these problems will

help them, the schools and students improve on e-learning. Respondents all respondents expect 3 & 9) suggested unfettered access to electricity by way of installing solar power as done in some schools. "If there is way teachers can have high quality Android phones that can improve their performance in development and implementation of e-learning" (respondent 15). The secondary schools usually suffer from the general problem of no (sic) electricity and low reliable internet. Solving this two will make any future e-learning successful" (respondent 11). The idea of donating desktop computers will stop since no (sic) electricity in (many) schools so next time government donate computers to schools they should be laptops (respondent 6). Other respondents cite issue of training and support. Respondents 3 & 8 were of the view that standing before a camera by a teacher to record lesson need special training. Here they are implying a training for would-be e-learning teachers before the studio time and support during it. Another respondent (Code 4) suggested that the government websites that teachers are asked to access or direct their students to, need to use simple content so that teachers and students with limited data can access them. Not every teacher have money to buy much data (resp. 5). Some responses (2) highlight that if special training sessions were held on on how to teach and learn online elearning will be success. Some of the teachers are already using the internet, they only need to be taught how to use it educationally (redp. 10).

IV. Conclusion

This paper looked at Issues and Challenges in the use of e-learning resources for quality education delivery in Post-Covid 19 period in secondary schools in Zamfara state of Nigeria from teachers perspective.

The issues related to e-learning as practiced by secondary school teachers during COVID-19 have categorized into three according to the emergent themes of the thematic analysis in line of the stated objectives of the paper. These are 'swift switch to e-learning', 'the challenge of distant interaction', and finally 'darth of resources and technical support'.

The first theme which is 'swift switch to e-learning' represent the grouping of the participants' responses that sought to address objective one of the paper which was to investigate how the Covid-19 induced e-learning affected teaching activities of Zamfara state secondary school teachers. Generally, the participants agreed on the quick nature of the migration to e-learning occasioned by the unforeseen and sudden outbreak of the Covid-19 pandemic outbreak.

The accompanying effects of this situation have been many but the respondents identified digital unpreparedness which made many teachers to participate in e-learning only partially. They also cited as challenges the poor basic and ICT infrastructure such as electricity, Android enabled phones, computers and internet connectivity. This finding concurs with those of Almaiah, M. Al-Khasawneh&Althunibat (2020).

The second set of findings was presented under the theme of the challenge of distant interaction. Many respondents reported that to interact with students from afar using technology is not the same as the traditional faceto face mode they are used to. This revelation is consistent with the findings of Kumar Saxena& Baber (2021).

The third and final finding from the thematic analysis of the responses was Darth of resources and technical support. Under this the the responses indicate that the various ways in which e-learning could be enhanced is by addressing shortage of resources, access to them, training the teachers as well as giving the technical support. This is in agreement with the findings of Peñarrubia-Lozano, Segura-Berges, Lizalde-Gil & Bustamante (2021).

V. Recommendations

- Teachers should be integral part of all future e-learning efforts especially at the pre tertiary level where most teachers are in experienced
- The basic infrastructure such as electricity must be adequately provided
- ICT infrastructure must be adequately provided to schools and teachers
- Instilling maintenance culture must be ensued in schools

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