

Review

A Paradigm Shift of Educational Management Amidst Covid-19 Pandemic Crisis in Nigeria

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Abstract

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This paper examined how education management could be redefined in the wake of the COVID-19 pandemic to ensure continuation of teaching and learning in academic institutions. The virus which was first reported in Wuhan-China eventually spread to other parts of the world including Nigeria. World Health Organization (WHO) declared it as a pandemic (public health emergency of international concern) due to its fast spread. Consequently, Nigeria was forced to lock down her social and economic activities as measure to curb the spread of the virus. This challenged education professionals to rethink alternative option to ensure continuation of teaching in schools. This paper argued that virtual learning would be the appropriate option. Besides the fact that virtual learning contributes enormously in curbing the spread of the virus, existing structure of ICT targets support effective switch from the traditional face-to-face approach to online learning. Advantages of online learning include; improved access to instructional materials; cost effectiveness, enhances creative learning environment, efficient and effective time management. The paper recommended among others that; government should train teachers on effective operation of the new e-learning equipment, teachers to train students on effective operation of the new e-learning equipment and government should provide the needed e-learning equipment and data to access internet. Government should also collaborate with other stakeholders in the provision of e-learning equipment in the management of education.

Keywords: COVID-19 Pandemic, Nigeria, Online Learning, Paradigm Shift

INTRODUCTION

Education has been recognized as an essential tool for the development of individual and the society at large. Knowledge acquired provides citizens with the desired skills, professional abilities, understanding of concepts, values and social abilities for the development of a nation. The attainment of any educational goal depends largely on an enabling environment where people feel safe, secured and free to operate. However, education in Nigeria is currently wallowing within the valley of Corona Virus pandemic whereby teaching and learning activities are greatly inadequate for lack of skills, resources, and low knowledge of Information and Communication Technology (ICT) to cope with the situation of COVID-19 new normal in the production of education. About 1.72 billion students were out of school during the peak of the

pandemic (UNICEF, 2020). Many nations resorted to creative pedagogical skills such as elearning, remote learning, multi-methods of teaching and child-centred approaches.

COVID-19 which started in Wuhan- China had spread like wild wind thereby reaching every nook and cranny of the globe. As at September, 2020, COVID-19 has spread to about 215 countries in the world including Nigeria. It was eventually imported into Nigeria in February 2020 and spread to almost every state of the country. The World Health Organization (WHO) on the 13th March, 2020 designated the corona virus as COVID-19 which is deadly. In an attempt to cope the harmful effect of the virus, a good number of measures were adopted globally by various governments such as, quarantine, self-

isolation, lock-down, curfew and the subsequent closure of socio-economic activities among others. Nigeria was not in isolation; it followed other global nations in March, 2020 and closed down all sectors of the economy including schools. This resulted to leaving many school going children out of school.

The closure of schools brought with its attendant challenges to students, educational planners, school administrators, teachers and parents. Many people were affected by school closures because efforts were made to provide education amidst the pandemic crisis. The ravaging situation denied teachers and students the opportunity to physically interact in the conventional class for teaching and learning. Consequently, final year national and international examinations such as West Africa Examination Council (WAEC), National Board for Technical Education (NABTEB), National Examination Council (NECO), and National Common Entrance Examination (NCEE) were cancelled thereby extended the graduation time of students which shattered the academic dreams of students, as well as programme schedules of educational institutions. This development had negative impact on the rights of learners, and poses a very big challenge to the realization of the sustainable development goal 4 on inclusive and quality education Federal Republic of Nigeria (FRN, 2020). School closure also had the potential to increase the rate of crimes due to hardship and idleness. This was quite evident in youth violent in Nigeria tagged ENDSARS. The negative impact of ENDSARS protest was allegedly blamed on students' long stay at home during the school closure. Research activities were negatively affected due to school closures.

The ugly situation and its attendant challenges forced the teaching professionals to have a rethink of alternative method of teaching to ensure continuation of academic activities in the school system.

Attempts to teach students in Nigeria was through the radio and television which became a failure for lack of access due to poor resources, poverty, epileptic power supply, low technological knowhow among others. Hence, teaching and learning activities in Nigeria became virtually at a standstill. During the physical teaching exercise when schools were reopened, the resources to use for preventive measures from corona virus and the observation of social distance seem a mirage. As a result, teachers and students stand the risk of contacting corona virus. The aforementioned has informed the need for this paper to explore the paradigm shift of the educational system, concept of COVID-19, E-learning approaches and the challenges of the new normal situations of COVID-19

Concept of COVID-19 Pandemic

COVID-19 is a disease caused by a new strain of corona virus, where 'CO' stands for corona, 'VI' for virus and 'D'

for disease. Following the outbreak, the world health organization designated the disease as COVID-19 which stands for corona virus disease of 2019. COVID 19 which started in Wuhan- China spread to every nook and cranny of the globe. As of September, 2020, COVID-19 had spread to about 200 countries in the world. The Virus which was eventually imported into Nigeria in February 2020 eventually spread to almost every state of the country. World Health Organization (WHO) on 13th March, 2020, declared the novel corona virus disease (COVID-19) pandemic. This novel virus is spread through physical contact, respiratory droplets when an infected persons coughs, sneezes or talks: and touching surface object that has the virus on it and then touching your nose, mouth and eye. The precautionary measures are social distancing, use of face masks, proper hand washing with soap and use of hand sanitizers are some of the measures adopted to curb the spread of the virus. Other measures adopted globally include quarantine, self-isolation, lock-down, curfew and the subsequent closure of economic activities. Federal Government of Nigeria followed other global nations in March, 2020 and closed down all sectors of the economy including schools to curb the spread of the virus.

Oxford advanced learners dictionary define pandemic as a disease that spreads over a whole country or whole world. It is otherwise an event in which a disease spread very quickly and affects a large number of people over a wide area or throughout the world. Pandemic usually affects an exceptionally high proportion of the population. The impacts and consequences on the socio-economic systems are often availing. This entails that all economic activities including education sector were affected during the lock down in Nigeria. Consequently, each of the 36 states including Abuja has reported index cases of COVID-19. Specifically on 29th September, 2020 statistics from Nigeria Center for Disease Control (NCDC) indicates total index cases of 58,460 while 1111 have died of the virus.

According to UNESCO (2020), almost 46 million learners have been affected by the nationwide school closures in Nigeria, of which over 91% percent are primary and secondary school learners (Thelma & Adedeji, 2020). This underscores the fact that academic activities in all educational institutions across the country were closed down during the covid-19 pandemic. Besides the fact that the situation lead to more school drop-outs, it exposed learners at a higher risk of abuse, loss of confidence and self-esteem, and decline in quality of teaching and learning process in Nigeria. It also denied many learners the opportunity to complete their education programme and proceed to the next level of learning. In view of the above, the attainment of sustainable development goal 4 which stipulates "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" is a mirage. Aside the fact that the pandemic limited opportunities of many learners

to access learning across the country, it has potential to reduce the literacy rate in Nigeria. The effects of the pandemic were not limited to the students alone but parents, teachers and government who bear the brunt of the challenges. From the foregoing, it could be inferred that the COVID-19 pandemic contributed enormously in worsening the impending crisis in the education sector.

The emergence of the corona virus and its consequences further exacerbated the deplorable condition in the education sector: hence, the need for the use of online learning as best option for teaching and learning in our schools. This was corroborated by Shivangi (2020) when he averred that the situation challenged the education system across the world and forced educators to shift to an online mode of teaching-learning. Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching-learning. This therefore, calls for education professionals to have a paradigm shift in management of the education sector amidst the COVID-19 pandemic.

Concept of E-Learning

Online or e-learning where 'e' denotes electronic is used to describe the use of electronic media and other information and communication technologies (ICT) in teaching and learning process. The term is variously known as online learning, open learning, web-based learning, computer mediated learning, blended learning, distant learning and m-learning. It refers to the use of information and communication technologies to enable learners access teaching or learning resources through online. Given this another face, it denotes situation where instructors or teachers use the information and communication technologies to teach or guide learners through online. E-learning is a teaching situation in which teachers and students are physically far apart but are virtually connected through the use of electronic media and information and communication technologies (ICT).

Online learning and teaching involve a diverse array of tools, resources, pedagogical approaches, roles, organizational arrangements and forms of interaction, monitoring and support with many possible combinations of substitution and interaction (Bates & Poole, 2003). The purposeful use of electronic media and information and communication technologies in the process of teaching and learning is known as e-learning. Virtual or e-learning enables students to access quality teachers anywhere on the planet as far as both of them have a reliable internet connection. It also allows students to communicate, interact and work together with one another remotely in any location without actually being physically present face-to-face, via webinars, audio and video conferences, web presentations, live streaming and text chats. Virtual learning provides opportunity of distance education to the

remote students by means of web-based online learning programmes as well as the instructors with innovative teaching tools to teach virtually from anywhere at any time, irrespective of the geographical area, through online classes and courses. Online or virtual learning basically becomes good alternative that could be explored to ensure continuation of teaching in our education sector.

Paradigm Shift of Educational Management

Educational management in Nigeria before the advent of COVID-19 was characterized with daunting challenges in fulfilling the promise of education which is a basic human right. Despite the introduction of the Universal Basic Education (UBE) programme to ensure equal opportunity for school-going age children to access school, the numbers of out-of-school children continue to rise unabated. Available information revealed that Nigeria has 13.2 million out-of schools children (Adengha, 2018). This clearly portrays the situation of our educational system before the covid-19 pandemic. This threatens the attainment of the sustainable development goal 4 which states "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". In Nigeria, teachings are done manually with the use of archaic instructional materials. Besides, these instructional facilities are grossly inadequate in the schools. Congestions characterized our classes as teachers must physically interact with learners for teaching and learning. This is not consistent with some local norms of students-teachers ratio. Consequently, many students were denied the privilege to learn under conducive environment thereby compromising quality of instructional delivery.

Educational management is the administration of both human and material resources through planning, organizing, coordinating, supervising and implementing structures to achieve educational set goals. The main purpose of educational management is to ensure effective and efficient environment that can promote, support and sustain effective teaching and learning. It requires creating and maintaining favourable situation for work. The approach towards obtaining a congenial environment that can warrant effective teaching and learning in school amidst COVID-19 pandemic is reflective in social change of the people. This is spearheaded by the school management to provide and harness resources considering the situation at stake.

The paradigm shift of educational management became necessary when the conventional teaching and learning approach could not serve the purpose amidst COVID-19 pandemic. Educational managers had to have a rethink to sort for remote learning through elearning. In Nigeria, the numerous challenges of digital compliant affected the teaching and learning processes. Despite the institutionalization of the ICTs education to keep pace

with the emerging technologies and equally improve quality of lesson delivery, schools were unable to function well due to inadequate equipment and unsteady power supply. Consequently, learners and instructors were cut off from teaching and learning activities. The possibility of face-to-face teaching in the conventional class room became disrupted. However, schools have fully reopened but observing preventive measures is yet another serious challenge due to lack and inadequate resources. There is need to shift from the conventional classroom teaching to elearning approaches.

Development of E-Learning in Nigeria

The history of e-learning in Nigeria could be traced back to the development of telecommunication which began in 1886 when cable connection was established by the colonial masters between Lagos and the colonial office in London to transmit information and receive feedback. By 1893, all government offices in Lagos were provided with telephone service for easy communication, feedback and easy access (Timothy et al., 2008). At this time, communication was solely controlled by Nigeria Telecommunications (NITEL). Since then, the sector has witnessed significant changes particularly in the 20th century when some mobile companies were licensed to establish and provide in Nigeria internet services.

Initially, the common type of e-learning was the lecture notes saved on CD-ROM which could be played in the class for the students. To institutionalize the introduction of e-learning in our educational system, Federal Ministry of Education included it in the Nigerian national policy on education which states 'in recognition of the prominent role of information technology (IT) in advancing knowledge and skills necessary for effective functioning in a knowledge based world, government shall provide adequate infrastructure and develop capacity for effective utilization of information technology (IT). Consequently, the rapid expansion of internet and mobiles technologies in Nigeria offers another opportunity to consider switching to the use of online learning in our educational institutions. Nigeria could leverage the availability of the internet facilities to facilitate their smooth switch from conventional face-to-face classroom to online learning. Timothy, Ibrahim & Femi (2008) asserted that some institutions in Nigeria are using it to promote distance education and life- long teaching. They further noted that institutions such as University of Ibadan, Obafemi Awolowo University, University of Benin, University of Abuja, University of Lagos, and National Open University of Nigeria among others have the facilities for e-learning. Today, many of our educational institutions (public and private) have adopted the use of internet facilities for teaching and learning. During the COVID-19 pandemic, some of the private institutions were delivering

lessons through the online platform thereby ensuring continuation of teaching and learning, but public schools were completely in a shamble. Their academic activities and calendar were disrupted amidst the COVID-19 pandemic.

Why the shift to Online Learning in Educational Institutions

In response to the COVID-19 crisis in 2020, the federal ministry of education directed that all academic institutions should adopt virtual means of teaching and learning to ensure continuation of education. This is in consonance with UNESCO recommendation of the use of distance learning programmes and open educational applications and platforms that schools and teachers can use to teach remotely. Besides, the situation challenged education system across the world and forced educators to shift entirely to online teaching-learning. For instance, research conducted on the advantages, limitations and recommendations for online learning during COVID-19 pandemic era in Pakistan suggested that; teachers and students averred that e-learning is a flexible and effective source of teaching and learning as most of them agreed upon the fact that this helps in distant learning with easy administration and accessibility along with less use of resources and time (Carey, 2020).

The e-learning in some parts of the globe is not a new phenomenon in promoting education; For example, Nigeria schools are using it to promote distance education and lifelong learning (Ajadi, Salawu & Adeoye, 2008). According to Shivangi (2020), many universities around the world have fully digitalized their operations understanding the dire need of the current situation. Hence, Nigeria could borrow a leaf from other countries to ensure online learning is adopted for use in our educational system. The shift from face-to-face lectures to online classes is the only possible solution to the COVID-19 pandemic. How well the schools manage their quality of education will show their capabilities to adopt the online teaching method. Digital 2020 Global Overview Report published in January, 2020 indicates around 169.9 million people which is 83% of Nigerians have access to mobile phone connection. The availability of the ICT gadgets and internet facilities provides enabling environment for the adoption of e-learning in our educational institutions. E-learning tools are playing a crucial role during this pandemic, it aims to help instructors, schools and universities facilitate student learning during period of school closure. Our perception of the covid-19 will go a long way in determining our approach in management of schools. From the foregoing, there is the need for our education sector to begin to explore online teaching as alternative approach in ensuring continuation of academic activities in safe environment.

Approaches to Online Teaching and Learning

There are two diverse approaches in online teaching and learning. Basically, lesson delivery could either be through Synchronous and Asynchronous learning method (Shivangi, 2020).

Synchronous learning method of learning requires simultaneous attendance at scheduled lectures. This could be either in the traditional classroom or in online classroom environment. It takes place in real time or specific period where the instructor and learner interact virtually for teaching and learning. Synchronous form of communication usually occurs in an online chat room when the students and instructor gather at a specific time to communicate directly with one another. This is a lived interaction situation or live lesson delivery when the two actors: instructor and students are both present at a given time. Here instructor can lecture students and questions can be asked and answered immediately. Subsequent follow-up questions could also be addressed immediately. As obtainable in traditional classroom situation, instructor usually enquires from students if they understood the lesson.

Put in another way, synchronous learning provides a lot of opportunity for social interaction between instructor and students: and among students across the globe. For instance, video conferencing enables teachers and students to interact while they hear and see each other. This method creates collaborative and interactive learning environment where students can give their immediate feedback, ask queries, and learn interestingly (Shivangi, 2020). The synchronous type allows learners to discuss with the instructor and also among themselves via the internet at the same time with the use of tools such as the videoconference and chat rooms. In this method, students are given code that enables them to link the instructor during the lesson delivery. Examples of synchronous learning or activities are chat conversation, zoom meeting or teaching and audio or video conferencing.

In online learning, students register for classes and receive a schedule as in traditional face-to-face class time table. Once the e-learning student can access the schedule, they can conveniently move from class to class online in line with the course time slot. They do this by logging in and out of classes as if walking from lecture hall to another lecture hall within the campus. During this 10 – 15 minutes break between classes, students prepare for the next virtual rather than running to the next class on campus. Regarding students' absenteeism, even when they miss lessons, the virtual classes are recorded and made available for students use at their convenient times. As in traditional face-to-face classes, on students who registered for courses in e-learning could access the courses lectures as each registered students is given access code.

Instructors in e-learning classes administer home-

work, assignments, quizzes and tests or examinations virtually. In this approach, questions are sent to learners through the platform which they answer and send back to the instructor at stipulated time depending on the type of assessment for marking.

Asynchronous learning on the other hand is a pre-recorded lecture without a live connection to students or holding a live online class using video conference or chat. Video and audio sessions can be recorded and made available for learners anytime who could not attend the live lesson or event. The recorded lesson could be uploaded on YouTube, Google, Whatsapp, email, radio, television or other social media platform for learners to access. High quality interactive video based lessons are prepared by curriculum experts and shared on daily basis for users to freely access specific topic of interest for the appropriate grade. Users could freely sign up to access daily lessons and assignments. Asynchronous learning permits each learner to study at his or her own pace and speed whether slow or fast learner. It also allows access to course materials, ask questions and practice their skills at any time based on their desire. The asynchronous mode also allows learners to discuss with the instructors or teacher as well as among themselves over the internet at different times. In e-learning, an instructor could make use of one or combine both synchronous and asynchronous method in ensuring effective teaching and learning.

Advantages of E-Learning Method for Teaching

The adoption of e-learning in our educational institutions has several advantages hence it is considered one of the best method of lesson delivery. Some of the advantages of adopting e-learning in our educational system include:

Rapid and easy course delivery

E-learning approach of teaching enables lesson delivery to be faster and easier especially in distance education. Through e-learning, objectives can be accomplished in the shortest time with minimal effort. This has been made possible with the use of internet and communication technology targets. E-learning allows educational practitioners wider coverage of communicating message to target learners or audience.

Improved and Increase Access

Online learning provides enormous opportunities for student to freely access varieties of qualitative learning materials like books, magazines, journals and other digital library materials or set of interactive and self-contained materials and study at their convenient times.

Secondly, it also has the potential to expand learners to access to different categories of qualitative educational institutions. Allen and Seaman (2013) concurred with the above as they said in higher education institutions in United State, enrollment in online courses continuous to exceed growth in face-to-face courses. Equally important is the fact that students from low socio economic background under this platform have opportunity to access quality education from within and overseas which would ordinarily been impossible under traditional face-to-face education.

Enhances Collaboration

Virtual or e-learning enhances collaboration of instructor and learners as tools such as telephone, cell phone, television, SMS, online forums, chats, blogs, social media platforms and e-mail can facilitate communication and discussion for meaningful learning experience among students. The availability of these communication facilities have made it easy for learners and teachers to freely interact and collaborate through the diverse social media platforms. By the use of these internet tools, students from different parts of the world could learn together, read each other's ideas and views, discuss common concerns and understand the differences in their attitudes. For instance during video conferencing, learners not only have the opportunity to analyze problems and explore ideas as well as develop concepts but also share diverse learning experiences from one another in order to experience themselves and reflect on their learning. This has therefore helped to remove barriers that have the potential of hindering participation including the fear of talking to other learners.

E-learning is Students Centered

E-learning in education focuses on the need of individual learner as an important factor in the process of education rather than on the instructor or educational institutions. Essentially, not only allows for students to work at a time and pace that is compatible with their learning needs but gave learner time to think and reflect about the materials better than the traditional lectures. Online learning appeals to diverse population of people with different academic needs that traditional education class are incapable of meeting the demand for online education. This led learner to understand ideas more thoroughly, which allowed them to participate more during face-to-face active learning exercise (Tuan, 2015). As a result, learners had deeper understanding of environmental biology and did well in the class, above the average performance of their face-to-face counterpart and above what they expected from themselves. Research conducted for United States department of education in

2010 reveals that an average student in online learning conditions perform better than those receiving face-to-face instruction (Means, Toyama, Murphy, Karla & Jone, 2009). Navarro and Shoemaker (2000) corroborating the above, found that student learning outcomes for online learners were as good as or better than the traditional learners regardless of background characteristics and that the students were greatly satisfied online learning.

It is Cost Effective

It is cost effective as there is no need for the learners to travel in order to access school or class. It is equally cost effective in as much as it offers opportunities for huge number of learners without the need for many buildings-classroom, many teachers and other support staff. Hence, many scholars and educators believe that online learning can be an effective tool in combating the rising cost education by spreading the cost of class over a much larger number of students compared to the traditional setting, dividing the cost by tens or hundreds of thousands of students as opposed to dozens (Tuan, 2015). This was corroborated by Shivangi, (2020) when he asserts that online learning is considered to be relatively cheaper mode of education in term of the lower cost of transportation, accommodation and the overall cost of institution-based.. Students from low socio-economic family background can access qualitative education from within the country and oversea due to reduced cost as learners can conveniently study from home without paying for accommodation, foods, travels expenses and other hard copies of instructional materials that support teaching and learning.

Reach Wider Coverage of Geographically Dispersed Area

E-learning is a convenient option for school particularly when there is need to reach wide and geographically dispersed learners. Online learning was occasioned by quest for quality education to all students, regardless of location, religion, race and time. ICT offer the opportunity of conducting thousands of classes on hundreds of subjects and courses available anytime, at any place, as per the need and convenience of learners. It also offers opportunity global standard as learners across geographical, racial, religious and time could access materials and study with their peers in every part of the globe.

Produce Creative Learning Environment

E-learning encourages creative (new) learning among

students. It enables creative solutions to different types of learning.

Efficient and Effective Time Management

Through e-learning, objectives can be accomplished in the shortest time with least amount of effort (Raba, 2005). E-learning saves time or the possibility of learning anywhere. For many students, e-learning is the most convenient way to pursue degree or higher education (Adina, Andreas & Monica, 2015). This is based on the reason that students in asynchronous class can conveniently log on and complete their assignment at the time they wish, whether it be early in the morning or late in the night. This method of lesson delivery also offers opportunity to those on the job to enroll and further their education without interference on their job or business as they could access learning materials and study at their convenient times. Learners can therefore go on with earning their livelihood along with improving their qualifications.

Disadvantages of Online Learning

Despite the advantages of using online approach in learning, there are equally disadvantages. The disadvantages of using online method of learning include:

Challenge of the Inadequacy of Learning ICT Equipment

The cost of personal computer in Nigeria is quite expensive for every average parent to afford for their wards. Similarly, the cost accessing internet is also high for average Nigerian to afford.

Incapacitation of Teachers and Students for Operating the Equipment

E-learning is a new method of teaching that requires many teachers and students with new skills. This challenge is that some of the teachers and students do not have computer background that would enable them to enable them operate the computer system.

Issue of Internet Connectivity in the Rural Communities

Though many companies have been granted the license to provide internet network in Nigeria, many communities cannot conveniently access the internet network. This

makes it difficult for them to effectively switch to the e-learning platform due to their inability to access network.

Poor Interaction and Socialization in Online Learning

This method of teaching and learning does not afford teachers and students the opportunity of face-to-face or social interaction.

Issue of Erratic Power Supply in Nigeria

The challenge of perennial electricity in Nigeria is no longer news. Many communities in the country do not have access to electricity. Those urban areas that have access to electricity are always faced with the issue of erratic power supply. This makes it quite challenging to rely on this situation for virtual class.

CONCLUSION

The wake of COVID-19 pandemic in Nigeria led to the closure of academic institutions as measure to contend the spread of the virus. Due to the lock down, many academic activities were disrupted thereby affecting all education stakeholders on a large scale. Educational professionals were therefore challenged by the lock down to think of approach that would be adopted to ensure continuation of teaching in our academic institutions. The paper emphasizes the need for adoption of virtual learning as appropriate option to ensure continuation in our educational institutions. Basically, virtual learning takes care of the social distancing as measure to curb the spread of the virus. Secondly, the availability of internet technology equipment in Nigeria would support effective switch from the traditional face-to-face approach to online learning. The paper acknowledges advantages of online learning to include improved and increase accessibility to instructional materials and courses, access to ICT equipment enhances collaboration among teachers and students, and e-learning is students centered as it allows categories of learners to learn at their paces. Other advantages are its cost effectiveness, produce creative learning environment, efficient and effective time management and ability to reach wider coverage of geographically dispersed area.

Suggestions

In view of the foregoing disadvantages, the following suggestions are made:

1. Government should train teachers on effective operation of the new e-learning equipment.

2. Teachers should also train students on effective operation of the new e-learning equipment.
3. Government should support students from poor socio-economic background with e-learning equipment and data to access internet.
4. Government should collaborate with Parents Teachers' association, Old Boys Association, Non-Governmental Organizations and philanthropists in the provision of e-learning equipment in the management of education.
5. Government should partner with network providers to invest in expanding the 4G services across the country.
6. Policy makers should review the nation education policy to capture the use of e-learning in Nigeria educational institutions.

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