



Redefining Tertiary Education Learning Environment for Greater Productivity in Post COVID-19 Era in Nigeria

Wordu, John Amaoge

PhD, Ignatius Ajuru University of Education

Faculty of Educational Management Port Harcourt

Email: johnwordu117@gmail.com

Abstract— The study focused on redefining tertiary education learning environment for greater productivity in post COVID-19 era in Nigeria. The paper indicated that redefining tertiary education learning environment involve the shift from the traditional learning environment to digital learning environment by providing a computer-generated environment that will support analytic thinking, collaboration and creativity. Also, a platform that can enhance the accessibility of education anywhere, any time with a flexible learning environment. The study concluded that for greater productivity in post COVID-19 era, Nigeria educational system should integrate information technology in teaching and learning. The study among others suggested that the non-governmental agencies and multi-national companies should collaborate with educational institutions in training and retraining of lecturers on educational technology and software design.

Keywords— Tertiary Education, Redefining, Productivity, COVID-19, Learning Environment.

INTRODUCTION

The concept of redefining tertiary education learning environment to enhance greater productivity in teaching and learning has been a burning issue among the policy makers and administrators of education. This is because of the interconnectivity and interrelatedness of society which became critical with the discovery of pneumonia of novel origin that occurred in Wuhan, China. The entire world was taken aback with the discovery of one microscope organism that found its source from a small town called Wuhan in China. (Wordu, 2020). The virus is the pathogen that is responsible for infectious respiratory disease called COVID-19. (IAU Global Survey Report)

The virus not only took the entire world by surprise but also unprepared. This led to the various attempt to contain the disease since there are no clinical approved cure. It is against background that certain proactive measures were adopted international and national to curtail the virus. Some of the measures adopted to ensure that the virus was not transmitted from one region to another were the closure of interstate boundaries and in some cases the closure of intrastate movement, stoppage of public gathering etc. For instance, the President of Nigeria in March, 2020 lockdown the Federal Capital, Lagos and Ogun States for a period of two weeks. In the same vein the Governor of Rivers State lockdown two local



governments namely Obio/Akpor and Port Harcourt local Government Areas. Others measures were the closures of all public gatherings- markets, cinemas, worship centers and the entire educational system.

It is imperative to note that while the schools in less developed countries were under lock and key the advance nations merely shifted from analog to digital mode of teaching and learning. According to UNESCO Report stated that 185 countries primary and higher education institutions were closed affecting 1,542,412,000 learners, which consists of 89.4% of total enrolled learners.

This very problem has called for shift from the face to face methods of teaching and learning to a scientific mode of teaching and learning. It is also a call for the redefining the entire educational system for greater productivity. If the desire for Nigerian tertiary education to meet the yearning of the Nigerian society and remain competitive in the post COVID-19 era there is need for a paradigm shift from the traditional learning environment that is saddled with over crowned classrooms, inadequate instructional materials where lecturers still interface with the students face to face through 'talk and chalk method' to a digital learning environment. The digital learning environment is the integration of information technology in the pedagogy of education where learning is students centered with adequate instructional resources to improve teaching and learning. It is virtual mode of learning that will encourage collaborative learning, creative thinking and learning will be an activities rather than rote learning.

The digital learning environment will break the educational barriers that hitherto inhibit effective teaching and learning, and make education accessible despite the geography, time or location. But education that will enrich the learning environment and enhance productivity. A digital learning environment will motivate the learners by using such educational resources like the video, televisions and other multimedia learning resources that combine text, sounds, and colourful movement of images that will enhance learning outcome.

The benefits of digital learning environment are enormous therefore the onus lies with the managers of tertiary education to provide the necessary infrastructures that will drive the entire system in the post COVID era in Nigeria. The challenges of tertiary education in the use of modern instructional materials are massive and need adequate attention if the Nigerian students must participate in global competitiveness.

CONCEPTUAL CLARIFICATIONS

Coronavirus (COVID-19)

Virus is a small contagious parasite that replicate inside a living cell of organism. A virus can also be defined as a microorganism that is smaller than bacterium that cannot grow apart from a living cell. (www.medicineNet.com). COVID-19 is an infectious disease caused by a newly discovered coronavirus. (www.who.int). The new coronavirus is a virus that emerged in December 2019 in

Wuhan in China. The virus was later called COVID-19 by the World Health Organization. In March 11, 2020 the World Health Organization declared it as pandemic. The virus is novel because it is caused by a strain



of coronavirus that has not been previously identified in human. It is different from the known classes of virus like the Middle East Respiratory Syndrome and the mode of transmission differs. It is not air borne disease like the varicella that cause chickenpox. (Wordu, 2020). The new coronavirus is responsible for the disease called COVID-19. COVID-19 is responsible for the cause of acute infection with respiratory symptoms with no universal clinical accepted cure.

The mode of transmission is through close contact from person to person. (CDC, 2020). This is done when a droplet from infected person get contaminated to another person through sneeze or cough. Therefore, for prevention of COVID -19 international and national governments decided to adopt certain proactive measures to stop or contain interstates or regional transmission. Some of the measures are lockdown of the economy, restriction of movements, and closure of educational institutions, markets and avoiding public gathering among other measures. For instance, in Nigeria the Federal Government of Nigeria on 30th of March, 2020 lockdown the Federal Capital, Ogun State and Lagos State for a periods of two weeks. As a follow up all educational institutions were closed and learning were put on hold except through virtual learning for institutions that have the basic infrastructures and the required manpower. Most states adopted the radio and television as the mode of learning. For virtually six months the tertiary institutions of learning in Nigeria were under lock and key as a result of COVID-19 pandemic. This pandemic arouses the consciousness of administrators to redefine new ways of enhancing learning environment for greater productivity.

Tertiary Education

Education is a veritable tool that help the individuals to develop and obtain certain characteristics that enable the individuals contribute to the development of the society. Education all over the world is adjudged as a veritable instrument that enhance the development of a nation. This is the reason why leaders all over the world mobilizer resources towards providing education that will meet the needs of the society.

Tertiary education is a concept that encompasses all education given after post basic education in Nigeria. It consists of the universities, inter universities, polytechnics and other specialized awarding institutions like School of Health, agriculture, and National Teachers Institution etc. The goals of tertiary education is to provide quality and accessible education that will meet the needs of the society, contribute to national development, develop skilled manpower that will reduced the manpower storage, and more importantly education that will forge and cement national unity among the cultural diversity. (National Policy on Education, 2014). The policy further asserts that these laudable goals will be achieved through quality teaching and learning, research and development among others.

Productivity

Productivity is a bogus concept in educational management that is difficult to determine unlike in the productive enterprises where productivity is measured base on the number of input and output ratio.



Despite the challenges associated with measurement of productivity educational managers has defined productivity in various ways and some of these definitions will be highlighted in a bid to have a firm grip of the concept. It is in recognition of this that Hornby (1998), opined that productivity is measured by comparing the amount produced with time or the resources used in the production. In the similar way Onyegeme-Okerenta (2016), define students' productivity of input delivered per unit of output. Also, productivity is measured simply by measuring the job performance in relation to input and output ration. (Nakpodia, 2011).

From the fore going, productivity in educational system is determined based on the quality of output in the educational system which is measured by certificate and the degree in relation to the unit of input which consists of the time and instructional resources that is used. Productivity in the school system can be measured through appraisal of students' performance and the educational resources used in the achievement of educational objectives. And in the determination of the objectives emphasis will be placed on the quality of resources, ethos of the school, classroom climate, and the methods and strategies adopted in the process of achieving the stated objectives. It is therefore imperative that the educational system of post COVID 19 must be information technology driven.

Redefining of Tertiary Education Learning Environment

The concept of redefine as defined by Oxford Advance Learner's Dictionary is to change the nature of something and in this context it is not only changing the concept or methods of teaching and learning but also the entire learning environment that will shift from the traditional learning environment to a digital learning environment. It is a conscious efforts of moving from paper administration to a paper-less administration. It is a wakeup call for educators and practitioners in education sector to rethink about how to change the educational environment and make it more interesting for both teachers and learners. The educational environment devoid of dilapidated buildings, inadequate classrooms, ill equipped libraries and laboratories that uses the digital vernacular in teaching and learning is certainly education that will enhance greater productivity in post COVID era.

More importantly, a learning environment that provide the learners the ability to achieve their potentials. Movchan (2018) sees learning environment as a platform where learners engage and interact in order to acquire new skills. This is usually referred to the traditional classroom where the teacher and the learners interact in order to inculcate skills and knowledge. The new learning environment envisage consists of all activates that enhance teaching and learning including the safety of the learner, the school setting and the ethos of the school and the entire educational behaviour that facilitates learning outcome. The learning environment that will devoid of confirmed classroom but learning that can be assessable irrespective of the location or time and also that will take cognizance of the students' challenges

It is incontrovertible that education learning environment in any institutions greatly influence directly or indirectly on the students learning ability. A good educational environment enhances student's attitude



towards learning and motivate the teachers and students in the accomplishment of educational tasks. Traditionally, the learning environment consists of the physical structures and the classroom where teaching and learning take place. But the learning environment that is envisaged in the post COVID-19 is learning environment that is technological induced. It is learning environment that take cognizance of the holistic nature of the learners and as well as the physical structure, also the wellbeing and safety of the learners, the teachers and ensure that the ambiance is safe for teaching and learning.

The post COVID -19 learning environment should be a great departure from the traditional method of the survival of the fittest by the students, to a learning strategy that is student centered and encourage collaborative learning. It is a learning environment that is empowered by world-wide web that support the use of multi-media resources like the radio, televisions and others electronics devices that are used in dissemination of information to large audiences.

It is pertinent to mention that positive educational learning environment in post COVID-19 will not only foster the transmission of the desired skills and knowledge to the younger generation but will help to update their skills and knowledge in line with international best practices. It is in this vein that Ozerem and Akkoyunlu, (2015) opines that learning environment is very strategic in the achievement of learning objectives. It expose the students and help their repertoire skills, knowledge, attitudes and behaviour in order to meet greater productivity and competency. Therefore, redefining becomes inevitable especially when the old system is unable to meet the demands of the society.

Redefining or restructuring in education learning environment is not merely a change in the methodology of teaching and learning but an innovation in teaching environment that will add value to the educational process without causing maximum discomfort in the entire education system. The post COVID-19 tertiary education learning environment implies the change in the educational process, resources and educational structure for the maximum benefits of the learners, teachers, and the society at large. The type of educational learning environment we advocate in tertiary education should not only add values in learning outcome but should also be sustainable.

The Need to Redefine Tertiary Education Learning Environment in Nigeria

Tertiary education is higher education that enhance specialization and the development of the necessary manpower that will provide the needed skills that will help in the development of society. The manpower must not necessary meet the immediate need of the society but the global community. Such education must be technological driven and provide the learner the necessary knowledge, skills and positive virtues that will enable the student be a global student. Such education must be inclusive education and accessible irrespective of the geographical location or cultural heritage. Education that is self-directed learning and that encourage the learners to collaborate with others irrespective of the distance.

This is the crux of the matter, a cursory look out the pre- COVID-19 tertiary educational learning environment system in Nigeria depicts the use of the traditional teaching methods where the teachers are



in constant interfacing with the learners and using chalk and board method which best is describe as the analog teaching method. The teachers are still using the lecture method where the teacher is seen as the custodian of knowledge who merely dish out the facts to the students. This teaching method makes the learner to be passive response to knowledge, and encourage rote learning while the teacher is the active instructor and custodian of knowledge. This analogy method of teaching inhibits the students from developing their initiative and critical thinking. It encourages students to be solo and not encourage collaborative learning among their peers at national and international level.

Furthermore, the increase in the population of Nigeria has also contributed to the rising increase in the population of students seeking admission to tertiary education. This has adversely stress the infrastructures in the tertiary education. It is against this background that Nwachukwu and Okoli (2015), revealed that public universities lack the necessary infrastructures that will enhance effective teaching and learning and unfortunately the ones available are in dilapidated condition such like the laboratories and workshops. The issues are further compounded with erratic power supply among others. Therefore, the clarion call for maximum integration of information technology is not only apt but a change that has come of age and educational sector must take part and harvest the potentials of technology in solving teaching and learning problems. This will not only enhance greater productivity but will help the recipient to contribute to global competitiveness.

The advent of COVID-19 has exposed dearth of infrastructures not only in the health sectors but also in the educational sectors especially in the less developed countries. The advent of COVID19 led to the closing down of educational system. Like the report IAU conducted on April, 2020 stated that most of higher education were affected due to COVID-19 and this led to shift from classroom teaching to e-learning. Therefore, this is clarion call for the Nigerian educational system to integrate information and communication technology into educational system if they must increase their productivity and remain relevant in the international competitiveness in post COVID-19 era.

Interestingly, the advanced economy has integrated information technology into educational system and the benefits are enormous. It is in this vein that Osim (2017), itemize the benefits of using ICT in school setting to include storage of information, teaching and learning through virtual learning, accessing teaching and learning materials through internet and programme development and installation. Information technology makes education available and accessible irrespective of the place and location.

The most important reason while post COVID-19 tertiary education in Nigeria should shift from analog mode of teaching to digital methods of teaching is not only that information and communication technology is now a house hold name that has permeated every facets of human enterprise but the fact that jobs in the national and international market are tied to information technology tools. Therefore, it behooves on the policy makers and education administrators and men alike to integrate information technology into the educational system to maximize the benefits of technology in the knowledge driven world.



Furthermore, the National Policy on Education (2014), recognize and state that the goals of tertiary education is to provide accessible and affordable learning opportunities within and outside the school setting that will provide the needed manpower to the society. These laudable goals as it is cannot be achieved without the integration of information technology in the act and process of teaching and learning. Therefore, information technology becomes the driving force that will encourage people to access information and knowledge anywhere, any time and irrespective of the location.

The traditional method of gathering of people in classroom is not only absurd but unrealistic if the education must be accessible and affordable. The up tune of information technology has not only expanded knowledge rapidly but has made a continuous access to information and knowledge, and provided the avenue for a continuous learning making education a lifelong learning process. Under this dispensation, education will no longer be in a confirmed environment but will be accessible at learner convinces. It is imperative to note that through information technology the students will be schooled with various problem-solving skills like critical thinking, higher-order thinking, soft skills and other problem solving skills that will help to develop the nation.

There is no gaining saying that the youths of Nigerians in the post COVID-19 era must be a modern citizens with prerequisite knowledge, skills, values and attitudes that will enable them to survive in any given setting and contribute to the development of the nation without recourse to cultural hindrance. The tertiary education in Nigeria must of necessity integrate technology and split-up from the traditional mode of teaching if the youths must remain productive and contribute to global competitiveness. The incursion of information technology in tertiary education will improve the learning environment and enhance the quality of learning, and help the learner to improve on the quality of life and participate in community development. More importantly, will help the learner to move at its own pace and learn according to their interest and needs.

Additionally, there is the need for the tertiary education learning environment in post COVID-19 era in Nigeria to change form the traditional learning environment to the digital learning environment. Firstly, it is imperative to note that Nigerians youths of today belong to technology generation having grown up with technology. Secondly, technology helps to break all impediments in the dissemination of knowledge and information. Therefore, if technology is well applied it will have reduced the storage of trained teachers and the over crowd of students that is prevalent in our education system and will promote individual and active learning experiences. ICT encourage learning without boundaries, anywhere and anytime with the dictate of the learner.

Challenges of Redefining Tertiary Education Learning Environment.

The federal government recognize the importance of information technology in the development of a curriculum of education that will meet the needs of the society. Hence the National Policy on Education (2014), stressed on the importance of producing skilled manpower that will reduced the shortage of the

required manpower for the society. The policy among others adopted the integration of information technology into educational system and encourage education that will provide a lifelong learning programs that will bestow on the learner's skills to encourage self-reliance, scholarship and innovation.

In the past federal and state government has made concerted efforts towards the assimilation of information technology into the education. In 2008, in a bid to make Nigerian teachers to develop and encourage the use of ICT in teaching and learning and also appreciate the use of ICT in solving teaching and learning challenges and inculcate computer culture in every sphere of education the federal government introduced National Policy on Computer Education (Asodike, 2015). Also, the School Net Nigeria was lunched, a non-profit organization with aim of mobilizing human and financial resources towards the use of information and communication technology to education. The mobile internet units, the Nigeria National Information Technology Development Agency (NNITDA) and others that intended to integrate information technology to the pedagogy of education.

In spite of these efforts of government in implanting information technology in educational environment in Nigeria, the tertiary education is still saddled with lots of challenges that has inhibited the teachers for greater productivity. The challenges became obvious with advent of coronavirus that led to the closing down of tertiary education in Nigeria for over six months. The biggest challenge is on the administrators of education to generate funds that will aid the integration of information technology into tertiary education management. It is in this vein that Garba (2015), opines that inadequate funding is a factor challenging the transformation of the quality of education in Nigeria. The paucity of fund had led to the inability of school administrator to procure the necessary facilities that will aid effective transformation of learning environment in Nigeria.

The federal and state governments are the major financier of public universities in Nigeria, and this had limited the propensity to acquire the necessary information technology that will drive the transformation of educational system for greater productivity. The budgetary allocation of fund to education has been a paltry sum as against the 26% of the annual budget recommendation by UNESCO. A cursory look at the budget allocation on education from 2010 to 2020 depicts insignificant percentage of an average of 7% to 10% which is a far cry to the UNESCO standard.

Another factor that militate the achievement of virtual learning environment in universities in post COVID-19 era in Nigeria is the lack of basic information technology tools. This is as a result to the inadequate fund at the disposal of university administrators. The post COVID-19 tertiary education in Nigeria should be technology driven and this invariably means that the university must procure the necessary facilities that will aid virtual learning. These facilities include but not limited to computer, internet, CD ROM, and other related facilities that aid effective teaching and learning. Unfortunately, these facilities are still alien to Nigerian educational institutions therefore very expensive to procure. Garba (2015), opined that the Nigeria educational environment lack the basic infrastructures that will make school environment

conductive for development of appropriate skills and knowledge that will aid development and self - sustaining of the individual. It is obvious that the task of lecturers is never again in covering the course content, or in adopting the adequate methodology, however it is been able to access the latest information technology tools and use it for teaching and learning. (Zubairu 2015).

Furthermore, most of information and communication technology are electric-driven and Nigeria nation tend to have low level of power production and high power outage. This is another setback in redefining the learning environment in tertiary education. This power outage makes it difficult for tertiary educators to efficiently utilize the few information technology tools that exist in various universities. The funds that are used in providing private electricity would had been used for more productivity venture in the universities.

The arduous of transmitting from analog to digital is a tedious task that require professional expert knowledge in curriculum development and policy implementation. Government in the past has made concerted efforts in the development of ICT policy. In 2001, the federal government lunched the National Policy on Information Technology and later established National Development Information Technology Agency with the aims to plan, develop and regulate the use of information technology and other agency established by federal and state government. Despite these efforts from government the learning environment is deprived of the necessary facilities that will enhance teaching and learning. Some of these devices are interactive board, voice projection system, multimedia player, iPod, virtual library and internet. The tertiary education environment skill lack the ambiance of virtual learning with overcrowded classroom with students. Most of the building are yet to be retrofitted for adequate wiring and providing enough ventilation to accommodate the installation of information technology tools.

It is very dishearten that teachers are averse to use of technology either as a result of their inability to use computer or their perception on the use of technology. Tinio (2000),

itemizes the reasons why teachers are hesitant to utilize technology because they lack the necessary software, wariness about the efficacy of computer in improving learning outcome, non-support from the governmental agencies, and the time to acquire the proficiency in the use of technology, and more importantly the dread of losing their clout in the classroom.

This epitomized the challenges of redefining tertiary education learning environment in post COVID-19 era

CONCLUSION

The advent of corona virus in the entire world has pump up certain challenges in Nigeria education learning environment that the school administrator must confront if they must improve their productivity and remain relevant in global competitiveness. Some of these challenges are inherit in Nigeria society while others are administrative lacuna which are not unsurmountable. Some of these challenges are paucity of fund, wariness about the efficacy of computer in improving learning outcome, lack of basic infrastructures



that will drive the system among others. Therefore, the paper concludes that for university education in Nigeria to worth its salt in post COVID-19 era the managers of tertiary education must integrate information technology into the pedagogy of education.

RECOMMENDATIONS

Based on the challenges inhibiting redefining of tertiary learning education environment in Nigeria the following suggestions are proffered.

There is the need for non-governmental agencies and multi-national companies to collaborate with tertiary education in the training of lecturers on the use of information technology and in development of educational software. For instance, the Coca-Cola has established computer learning centers in Philippines this can also be replicated in tertiary education in Nigeria.

The federal government and state government should increase the budgetary allocation to education to attain the mandatory UNESCO 26% of annual budget. The university administrators should seek alternative ways of funding universities projects like consultancy services and massive investment in business enterprises.

Since 21st century is an information driven, it is instructive for the education planners to establish information and communication technology department with the mission goal of providing education technology, installation, maintaining and manufacturing of indigenous educational technology that will be sustainable.

REFERENCES

- [1] Asodike, J. D. (2015). Change and innovation in primary and secondary education in Nigeria. In J. O. Ajuonuma, J. D. Asodike & R. O. Anyaogu (Eds). *Issues and Trends in Change and Innovation in Nigerian Educational System*
- [2] CDC (2020). CAC updates; COVID-19 transmission. <https://www.cdc.gov>
- [3] Chandra, R. (2003). *Information technology. A revolutionary change*. India, kalpaz Publication. <https://books of google.com>.
- [4] Ezemwafor, J.I. and Okoli, C.I. (2014). Implementing innovations in business education in the 21st century. A paper presented at the Faculty of Education international conferences held at the auditorium, Nnamdi Azikwe, Akwu, March 26th-29th.
- [5] Federal government of Nigeria (2014) National policy on education Lagos, NERDC.
- [6] Garba, S. (2015). Challenges and prospects to transforming the quality of Nigeria education for global level. A psychological perspective. In T. A. Bolarin & K. Isyaku. (Eds). *Transforming Education in Nigeria to levels of relevance and competitiveness*. Kaduna, Nigerian Academy of Education
- [7] Hornby, M. C. school choice and school productivity. retrieved from <http://www.nber.org/paper>.

- [8] Motala, S (2000). Educational transformation and quality. The South African experience. Paper presented at the annual meeting of the comparative and international education society. San Antonio, Texas.
- [9] Movchan, S. (2018). What makes a good learning environment? <https://raccoongang.com>
- [10] Nakpodia, E. D.(2011). Work environment and productivity among primary school teachers in Nigeria. International multidiscipline journal, Ethiopia 5 (5.)
- [11] Nwanchukwu, J.N. & Okoli, F.C. (2105). The problems and prospects of private ivory towers in Nigeria. Singaporean Journal of Business Economics and Management Studies. 4(6).
- [12] Okoli, N. J.Ogbonda, L. & Ekpefa-Abdullahi (2015). Preparing teachers for the contemporary Nigeria. Journal of Education and Practice. 6(14).
- [13] Onyegeme-Okerenta, B.M. (2016). Science laboratory management and students' productivity In S. O Oluwuo & J. D. Asodike Managing schools for productivity; emerging perspectives.
- [14] Osim, R.O. (2012). The Nigeria teachers and the gap in digital. In C. Willians, J. D. Asodike, & V. N. Duru (Eds). The teaching professions and teaching in digital world. Port Harcourt. Oxford Advanced Learner's Dictionary (2000). Oxford University Press.
- [15] Ozerem, A. and Akkoyunlu (2018). Learning environment designed according to learning style and its effects on mathematics achievement. Eurasian Journal of Educational Research. 61.
- [16] Scott, C. L (2015). The future of learning2. What kind of learning for the 21 st century? <https://unesdoc.unesco.org>.
- [17] Wordu, J A (2020). An assessment of students' knowledge of COVID-19 in university education in South-South Nigeria. Education Research Journal 10(6) p 192-197.
- [18] Tinio, V. C. (2000), ICT in education. Asia-Pacific development information programme UNDP. Retrieved on 18th July, 2019. Wikieducator.org
- [19] Zubairu,S. (2015). Relevance of integrating information and communication technology policy for educational transformation in Nigeria. In Bolarin, T. A. & K. Isyaku. Transforming education in Nigeria to levels of relevance and competitiveness.