

The Covid-19 Pandemic and Restructuring of the Educational Pedagogy in Nigeria

Goodhope Chinenye Igwe, PhD

Department of Educational Management
University of Port Harcourt, Nigeria.

Abstract: *This paper examined the impact of Covid-19 and the need to restructure the educational pedagogy in Nigeria. It adopted the cognitive theory, which emphasizes the re-organization of information for the discovery of new explanations or the adoption of old ones. The adoption of the theory became necessary because re-organizing the educational system to involve the introduction and effective use of appropriate technology for learning and teaching would produce new explanations to knowledge. The paper argued that Nigeria is plagued with several challenges that have prevented it from taking off with the use of adequate platforms for learning and teaching. Such issues raised include poor or non-availability of facilities for effective online learning, poverty on the part of the students preventing their access to e-learning, high cost of data, poor or unstable power supply. In addition, those in the remote communities suffer more, as they cannot afford devices; they have limited access to network and internet, among others. The paper recommends that government should increase budgetary allocations to the education sector; collaborate with other key players in the sector to provide a dependable power supply, internet services, amongst others.*

Keywords: Covid-19, Educational Pedagogy, Restructuring, Development, Nigeria

Introduction

The outbreak of the Corona virus disease (Covid-19), described as a pandemic by the World Health Organization (WHO), has ravaged the world and caused many deaths. The sudden appearance of this virus took the world aback and affected negatively the economies of several countries.

Economic activities at a time were grounded as individual and organizational businesses were put on hold to avoid contracting the deadly disease. China, the United States, United Kingdom and European countries suffered huge human loss and economic downturn. Most developing and underdeveloped countries resorted to help from the advanced societies for funds and equipment. The education sectors of these countries were not left out, as they suffered tremendously because of the closure of schools. Sovereign states, whether they have had cases of the virus or not, took preventive measures to curtail it; one of which was the shutting down of institutions of learning. The disruption of learning in schools around the world has made the education sector suffer more with over one billion students affected. Lu (2020:1) quoted the UNDP as saying “the effective out-of-school rate for primary education has increased substantially everywhere, but it is highest in low human-development countries”

Nigeria is not an exception as far as the deadly corona virus is concerned. The Federal Government of Nigeria announced the closure of institutions across the country as part of measures to stem the tide of its occurrence and spread. The impact of this action has been enormous, including keeping students at home for several months without adequate access to formal learning including but not limited to e-learning. The implication of their inability to have access to learning does not mean well for development considering the importance of education to the individual and society. Education builds and develops the minds of the individual to attain the status of knowing the distinction between right, wrong, good and bad attitude and to strive to build a better society. Away from the moral benefits of education, scientifically, individuals are trained to invent, build and make innovations for the technological development of society. All these contribute to the betterment of the society as knowledge is acquired through the process of learning.

No doubt, the emergence of the corona virus and its ravaging effects has further exposed the lapses inherent in the education system of Nigeria. The lackluster attitude of the government towards education, particularly public schools, has been worrisome. Lack of infrastructure such as classrooms, laboratories, and information and communication facilities, corruption, unpreparedness, poor budgetary allocations are some factors that contribute to the inability of many institutions, especially, the public institutions, to embrace e-learning, within the Covid-19 period in Nigeria. More than 98% of learning could not take place due to the shutting down of schools occasioned by the lockdown. Failure therefore, to address these issues among others, would likely lead to more devastating effects in the education sector of the country.

This paper, therefore, focuses on the need to restructure the educational activities in Nigeria. The work is divided into six sections; introduction, an overview of education in Nigeria, the Covid-19 pandemic, the Covid-19 pandemic and its implication for education in Nigeria, Post Covid-19 and education in Nigeria and summary, conclusion and recommendations.

Theoretical Framework

This paper is anchored on Piaget's theory of cognitive development as put forward by Stevens-Fulbrook (2019:3). According to him, learning takes place when there is re-organization of information, by either discovering latest explanations or adapting old ones. Indeed, the re-organization of information considered here is the discovery of new techniques and or approaches to learning by the introduction and effective use of Information Communication Technology (ICT). Re-organizing the system of education to incorporate the e-learning procedure would not only improve the gathering of information, but also enhance teaching and learning. Away from the traditional information in class, students would have the opportunity of reshaping their views, ideas and knowledge gathered from the internet through e-learning. The theory lays emphasis on development, which this paper considers the end-product of learning and indeed, education. In the light of this, the need to restructure the education system requires a re-organization of the learning processes in a bid to gather insights of happenings around the world and give new explanations.

Education in Nigeria: An Overview

Taiwo (1999:2) traces the origin of education in Nigeria stating that it predates the advent of Islam and Christianity in the country. Education at the time was informal, described as 'traditional or indigenous educational system'. From historical perspective, he presents the Islamic and Western system of education as the types of education that existed. By 1906, according to Taiwo, one hundred and twenty six (126) primary schools and one (1) secondary school were established with eleven thousand, eight hundred and seventy-two (11, 872), twenty thousand, eight hundred and twenty (20, 820) enrolments in both primary and secondary schools, respectively in Nigeria's south. For the North, one primary school existed at the same period and no secondary school. By 1957 however, there was an increase in the number of primary schools to 13, 473 and 17 secondary schools in Southern Nigeria.

In an attempt to define education, Taiwo (1999:1) revealed that it has no universal definition but cited Fafunwa (1974) as saying, it is "the aggregate of all the processes by which a child or young adult develop the abilities, attitudes and other forms of behaviour positive to the society, in which he lives".

Similarly, he cited Abdulkareem (1990) who asserted that education entails the process of developing the capabilities, aptitudes, abilities and interests of a person such that he would function successfully in the society. Indeed, education, be it formal or informal, strives to make a person or persons attain through learning the knowledge to differentiate between good, bad, right and wrong attitudes in society and develop the right kind of attitude to build personal capabilities and attitudes. It provides an opportunity for people to develop their talents and skills in all spheres of human endeavour. Human resource development and capacity building is therefore driven by educational activities, in and out of the classrooms.

Okoroma (2006:258) states that education "is an instrument for excellence" that liberates the people from poverty and ignorance. Citing Ukeje (1996), he maintained, "education is for life and for living. It is an investment in people, which pays untold dividends to the society. When that investment is not made or is made inadequately, the society suffers a loss". From the foregoing, it can be inferred that educating the citizens of Nigeria is one great achievement that will bring about progress in the country and move it forward (Osarenren-Osaghae & Irabor, 2018:92). Education has however, been viewed as not only attending school but the acquisition of knowledge through formal, informal and non-formal means. Osarenren and Irabor (2018:92) see it as "the system of motivating positive institutional changes and development, moving towards creating the required internal solidarity, cohesion and integration of people to achieve the common good for all in the society.

The National Policy on Education, according to Okoroma (2006:285) is based on the nation's philosophy captured in its national objectives of building a free and democratic society, a just and egalitarian society, a united, strong and self-reliant nation. Indeed, the educational policy by the Simeon Adeba – led committee of 1973 captured the objectives of education, which includes to:

1. Inculcate national consciousness and unity
2. Inculcate the right type of values and attitudes for the individual and the Nigerian society
3. Train the mind in the understanding of the world [environment] and
4. The acquisition of the suitable skills, competences and abilities, both mental and physical and equipping the individual to live and contribute to the development of society (Lenshie, 2013:26; FRN, 2004:8).

In fact, education is needed to assist in the construction of socially established normative culture, which will provide for security and building of capacities for strengthening, uniting and pursuit of the common good of all (Lenshie, 2013:31).

Jacob (2020:41) identified the objectives of education to include the acquisition of physical and intellectual skills that enable the individual to develop into being a valuable member of the community, through the acquisition, inculcation and development of the required value orientation for individual and societal survival. Others include the development of the capacities of individuals to have a proper understanding and appreciation of the environment, as well as gaining an overall view of the internal and external setting. Hence, the emphasis for higher educational institutions to pursue its goals through teaching, research and community service (Jacob, 2020:41). It is therefore, apt to state that education plays an important role in the development of the individual and society, in general.

Different approaches have therefore, been adopted to ensure the education of everyone in the society. For instance, there was the introduction of the Universal Primary Education Scheme in the 1950s and 1970s to provide opportunities for all to get educated. Recently, the Universal Basic Education was adopted to serve similar purpose. Its target is to involve everyone and in the words of Aluede (2006) cited in Alase (2017:7), the UBE is “the whole people without exception”. The underlying factor here is that education is for all and exempting no one. Two cardinal issues the UBE was to address is to establish an effective institutional framework for monitoring learning, teaching, and educational programmes for the acquisition of functional literacy, numeracy and life skills. This stressed the significance of education for the building of individuals geared towards the betterment of the society. However, the attainment of Nigeria’s desires educationally, is yet to be realized as many scholars and citizens have claimed there is deterioration in the education sector (Lenshie, 2013:3). The infrastructure is not enough to cater for the needs in the sector, shortage in the supply of work force or personnel (teachers) in the area, lack of adequate training and capacity building in the primary and secondary institutions of learning.

Alase (2017:71) opined that the Universal Primary Education Scheme [and the Universal Basic Education] has failed due to lack of proper planning, knowledge of the number of teachers, inability to adequately project the estimated population expected to be in school at a particular period. In addition to these was the inability to estimate the cost required for the provision of the exact number of school buildings and learning facilities, as well as the financial thought of the entire programme. For higher institutions, Alase (2017;p.71) insisted that while students’ desire for university education persisted, the needed resources to bring about its quality has been inadequate. Again, the ‘huge teacher-student ratio’ and overcrowded classes that worsened and led to malpractices in examination, brought about the failure faced by the Nigerian tertiary institutions.

The Covid-19 Pandemic

The corona viruses are a family of viruses responsible for illnesses or ailments ranging from common cold to sicknesses such as Severe Acute Respiratory Syndrome (SARS) and the Middle East Respiratory Syndrome (MERS), according to Jacob (2020:42),citing the World Health Organisation. Originally, these viruses were from animals and transmitted to humans beings. The covid -19, according to Jacob (2020:43) likely emerged from a seafood market in Wuhan, China where wildlife is illegally traded. However, some Chinese researchers said “the virus could have spread from infected animal species to humans through illegally trafficked pangolins, which are prized in Asia for food and medicine” (Jacob, 2020:43). It is a “communicable respiratory disease caused by a new strain of coronavirus that causes illness in humans” according to africacdc.org.

Since the outbreak of the virus in Wuhan, China, it has spread round most parts of the world causing the death of many and halting economic activities and progress. Those who contracted the Covid-19 can be symptomatic or asymptomatic in the early stages based on the immune system of individuals. The disease presents as symptoms, dry cough, fever, tiredness, shortness of breath, headache and general body weakness (Olaitan, Aborode, Ayodele, Iretiayo and David, 2020:3). As a result of the outbreak, students from Africa residing in Hubei, where Wuhan is located faced some challenges, including financial constraints.

Most of them were stranded such that aid was provided by Nigeria, Ghana, Benin and other sub-Saharan countries.

The Covid-19 pandemic has caused the death of thousands of Chinese at its emergence before measures were taken to minimize its spread. China did not only suffer the effect of the disease; most countries of the world were caught up by the pandemic, including the United States of America, United Kingdom, Italy and most African states. It led countries to taking emergency measures or policies in a bid to curtail its further spread.

In Africa, Egypt was the first country to be hit by the dreaded pandemic and had since recorded more than 270, 000 cases out of which were 7, 000 deaths and 121 recoveries (Olaitan et al, 2020:4). Unprepared to wage the ‘war’ against the calamity, most countries on the continent had to shutdown educational institutions as a way to prevent it from massive reach. This action has

presently kept students at home leaving our educational institutions to look for alternative means of learning and teaching. Searching for alternative ways of learning took a long time because there were no adequate preparations for e-learning.

Nigeria also had its own share of the impact of the pandemic after the first reported case on February 27, 2020. An Italian returnee arrived Lagos and days after, it was discovered that he was a carrier of the Covid-19.

The number increased on daily basis and Fear and panic gripped the country causing her to adopt measures prescribed by the World Health Organization to curtailing it. Like other nations, Nigeria closed down institutions of learning without adequate and effective windows or opportunities for the students to continue learning.

Since the emergence of the virus, the cases of infections and deaths have increased over time. For instance, the cases across the globe as at 25th September, 2020 indicated a figure of 32, 440, 353 total cases, 23, 946, 081 recovered cases and 988, 175 deaths (worldometere.info). In Africa, the figure showed 874, 036 active cases, 18, 498 deaths and 524,557 recovery cases (africanews.com) while that of Nigeria showed 57, 849 cases, 1,102 deaths and 49, 098 recoveries (ntanews25th September, 2020; worldometers.info).

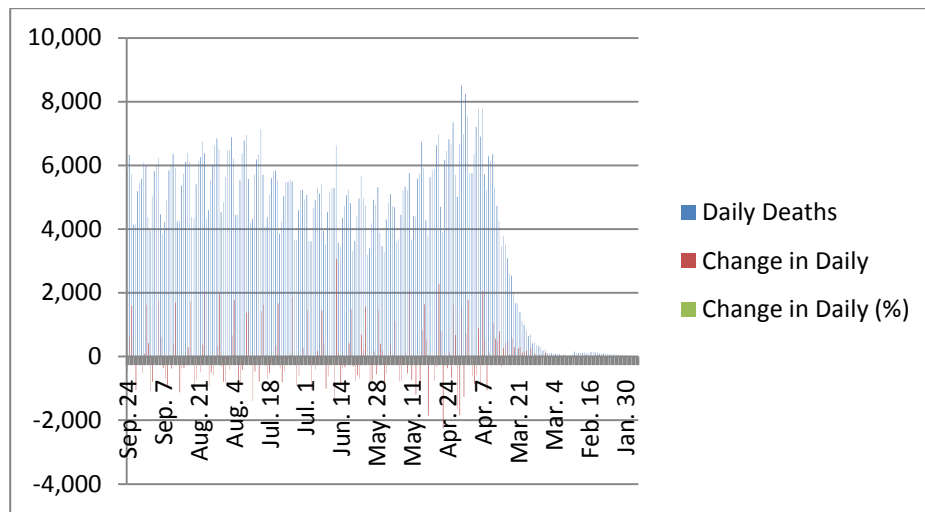


Figure 1: World Daily Deaths.

Source: worldometers. www.worldometers.info

The pandemic has enormous impact on the workforce, not minding the sector and location, globally. Against this background, the International Labour Organisation (ILO) according to Jacob (2020:44) said “policy responses need to focus on providing immediate relief to workers and enterprises in order to protect livelihoods and economically viable businesses, particularly in hard-hit sectors and developing countries”. He posited that in middle and low-income states, the worst-hit industries have a high rate of low-wage workers in informal service and therefore have limited access to services in the health sector, as well as state welfare safety nets. The Covid-19 impacts workers in the economic subdivision of the economy, who not only go with a high risk of getting infected by the virus but are also impacted directly by the lockdown actions. The lockdown approach aimed at curtailing the pandemic led many to relocate to rural areas because of the challenge faced in the urban centres.

The pandemic surfaced in Nigeria on February 27, 2020. Ever since several person have been affected. See figure below for an analysis on state basis.

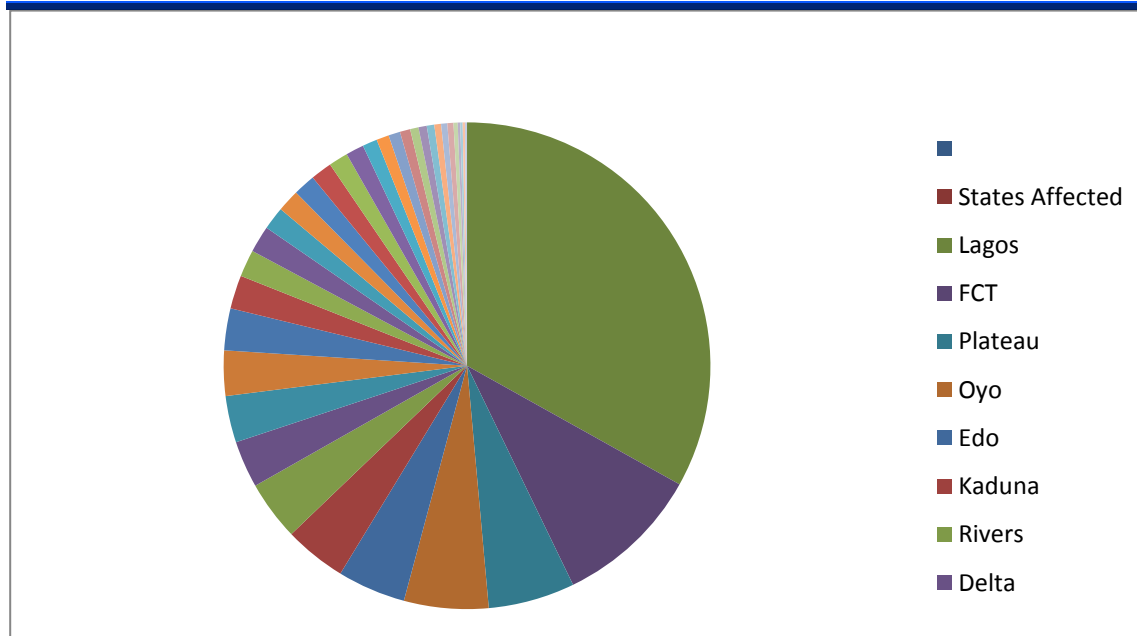


Figure 2. Number of confirmed, admission, discharged and death cases in Nigeria based on states.

Source: <https://www.worldometers.info/coronavirus/country/nigeria/>

Table 1. Number of Corona Virus cases in Nigeria, September 25th 2020

S/No.	State	Confirmed cases	Cases on admission	Discharged cases	Death cases
1.	Lagos	19,123	3,672	15,246	205
2.	FCT	5,615	603	4,935	77
3.	Plateau	3,322	797	2,494	31
4.	Oyo	3,239	941	2,250	39
5.	Edo	2,617	24	2,486	107
6.	Kaduna	2,384	86	2,264	34
7.	Rivers	2,287	39	2,189	59
8.	Delta	1,800	101	1,650	49
9.	Ogun	1,789	40	1,721	28
10.	Kano	1,734	19	1,661	54
11.	Enugu	1,285	98	1,166	21
12.	Ebonyi	1,038	1	1,007	30
13.	Kwara	1,028	78	925	25
14.	Abia	881	26	847	8
15.	Gombe	857	90	742	25
16.	Katsina	848	367	457	24
17.	Osun	818	18	783	17
18.	Borno	741	2	703	36
19.	Bauchi	692	14	664	14
20.	Imo	566	337	217	12
21.	Benue	480	57	413	10
22.	Nasarawa	449	111	325	13
23.	Bayelsa	397	4	371	22
24.	Jigawa	322	3	308	11
25.	Ekiti	317	16	295	6
26.	Akwa Ibom	288	8	272	8
27.	Niger	259	15	232	12

28.	Anambra	237	5	213	19
29.	Adamawa	234	20	198	16
30.	Sokoto	161	0	144	17
31.	Taraba	95	16	73	6
32.	Kebbi	93	1	84	8
33.	Cross River	87	4	74	9
34.	Zamfara	78	0	73	5
35.	Yobe	75	8	59	8
36.	Kogi	5	0	3	2

Source: NCDC (2020) available at <https://covid19.ncdc.gov.ng>

For Adeoye, Adanikan & Adanikan (2020:2), Covid-19 has halted economic activities including the educational sector and therefore, led to recent changes and disruptions in calendar of institutions. They admitted the importance of e-learning and its convenience for students and lecturers, cost benefits and attempts to resolving the problems associated with face-to-face contact learning. However, the situation in Nigeria has been different from those of the advanced countries like Japan and the United States and identified some challenges or hindrances to the use of e-learning platforms. Such hindrances include inadequate or unstable supply of power, high cost of internet subscription, poor access to the internet and connectivity, particularly in the rural areas where students live and the inability of the students to purchase the required gadgets due to poverty.

The pandemic according to Jacob (2020:16) affected research program of high institutions in Abuja and the flow of international research grants and funding of research in the higher institutions by the government.

Notwithstanding these challenges, some private universities in Nigeria, according to Adeoye, Adanikan & Adenikan (2020:29) have taken to the e-learning as a measure to close the gap in academic calendar and avoid distortions. The platforms used for e-learning include the Microsoft teams, Google hangout, Zoom, Bamboo learning, Adobe Cativate, Blackboard learn, Skype Google classroom and Docebo, among others.

The Covid-19 Pandemic: implication for education in Nigeria

The novel coronavirus (Covid-19) has led to the closure of schools in the country (Adeoye, Adanikan & Adanikan, 2003: p. 29; Olaitan, Aborode, Ayodele, Ireteyio & David, 2020:3; Obiakor & Adeniran, n.d:3; Andam, Edeh, Oboh, Pauw & Thurlow, 2020:4) as the government took measures to prevent the spread of the dreaded disease. Economic activities were shut down as well and lockdown imposed on some cities across the country. Indeed, the closure of schools have disrupted the school calendar and caused students to stay at home more than expected. The impact has been huge considering the inability of the school children to access learning.

Although the world has been described as a global village (Alase, 2017:2), Nigeria has not been able to tap fully into the globalizing trends as it relates to the educational sector.

The “nationwide closure of institutions of learning has disrupted learning and access to vital school-provided services for a record number of students in Nigeria” (Obiakor & Adeniran, n.d:2). Citing UNESCO, Obiakor & Adeniran, (n.d:2) revealed, “almost 40 million learners have been affected by the nationwide school closures, of which 91% are primary and secondary school learners”. In fact, the landscape of learning has been disrupted by the Covid-19 pandemic and therefore, limited the students’ right to learning. The pandemic has further exposed the challenges in the education sector of Nigeria. Obiakor and Adeniran (n.d:1) espouses that the education sector ‘is not adapting’ to the changing situation caused by the emergence of Covid-19 and would be expected to make great effort in that regard in the near future. Comparing the socio-economic burden imposed by the outbreak of the disease and the subsequent closure of schools, the students of the public school are more impacted than those of the private ones. The reason is that privately owned schools started initiating distance learning programs, tapping into the advantage provided by the various ICT-learning opportunities while funds by the government, planning deficiencies have continued to delay plans to make provision for distance learning in public school.

It has been argued that the chances for private schools to gain or have such benefits from ICT is shaped by the higher socio-economic background of the students and their willingness, as well as ability to have better facilities provided by private institutions (Obiakor & Adeniran, n.d:3). On the other hand, public schools find it difficult or not too easy to tap into the ICT provision because of poor funding and the low socio-economic status of the pupils and students alike. Other factors include poor infrastructure such as inadequate or epileptic power supply and poor or non-availability of internet connectivity. Olaitan et al

(2020:4) asserted that the closure of schools and universities in almost 125 countries across the world affected over 70% of students.

The outbreak of the pandemic has revealed several lapses in education in Nigeria, particularly in the public schools for which funding is provided by the government. There are no provisions of the required facilities to give the students access to benefit from e-learning or online learning. Thus, they are found at home doing little or nothing as regards education. As stated earlier, poor funding is the major limiting issue confronting public institutions. In the private schools where ICT has become familiar and put to use for e-learning, the challenge of network and poor power supply posed serious threats. It is therefore obvious, from all indications, to state that most students are now staying at home without accessing e-learning corroborating Obiakor and Adeniran, n.d:4) who stated that about 60% of Nigerian students do not have access to the internet. In this wise, most children and indeed, students are left behind in the online learning. The Covid-19 pandemic has actually brought to limelight the significance of distance and online learning, for which a handful of educational institutions adopt (Adeoye, Adenikan & Adenikan, 2020:28).

Post-Covid-19 Pandemic and Education in Nigeria

The widespread attack by the Covid-19 on economies of the world, as well as education has called for concern following the stay-at-home of students around the globe. It has become known that the shutting of institutions of learning is one of the effects of the outbreak of the dreaded disease. With 1.2 million children out of school globally, triggered by the Covid -19 pandemic, e learning has become the order of the day, particularly in the Western world. There has been a rise in e-learning whereby teaching is carried out remotely and digitally, causing a dramatic change in the teaching-learning process. There is an increase in the use of online platforms for learning culminating in the high growth and adoption of technology in education (Li and Lalani, 2020:1).

The Covid -19 periods has witnessed teaching and learning online via several platforms. The approach has become useful in education to avoid physical contact.

This has actually changed the way teaching is done and according to Li and Lalani (2020:2) quoting Prof. Amjad “it enables me to reach out to my students more efficiently and effectively through chat groups, video meetings, voting and also document sharing”. One advantage of online learning is the retention of information and use of less time.

The use of technology in learning as a practice in the advanced countries makes the learning conducive and convenient. However, in Nigeria, this situation is not conducive because of several challenges to education before the advent of the Covid-19 deadly disease. Nigeria is currently contending with the challenges of poor power supply, poor infrastructure, low and poor quality of telecommunication services, absence of reliable access to the internet, poverty, and corruption. Osarenren & Irabor (2018:5) admitted that in the 21st century, Nigeria remains technologically disadvantaged educationally, with power failure in greater measure.

Now, most students are stuck, no learning because the provisions for e-learning are not available for use. Adopting the use of technology cannot only change methods of teaching and learning, it can also elevate the role of teachers from importing received knowledge in the direction of working as co-creators of knowledge (Broom, 2020:4; Schleicher, 2020:6).

Looking at education in Nigeria in the post-Covid-19 will require a lot to be done by the government and the individuals in the society to attain greater heights in education. The introduction of technology in the learning and teaching processes should be the top priority of the government and private sector. Although a blend of the face-to-face and online methods will suffice at the time, more attention should be given to online learning, which is convenient while less emphasis should be on the traditional classroom face-to-face learning. As time goes on, the online learning would be more appreciated and used over and above the classroom contact method of learning.

Summary

It is evidently clear that the Covid-19 pandemic has caused the deaths of many and affected humanity in all spheres of human endeavour, including the education sector of countries. There has been a shortfall in oil revenue as prices fell by 45 percent to about 30 dollars per barrel arising from the impact of the disease (Andam et al, 2020:4). Travel ban was also imposed as the government closed its air and land borders to travelers and put a hold on the passenger rail services within the country. Due to its adverse effect on the economy of countries, there is an increasing poverty rate to 14 percent points. Household lost a third of their incomes leading to 27 million people into the poverty circle in Nigeria.

It led to the closure of institutions of learning, suspension of internal and external examinations like the end of term and West African Senior School certificate examinations, as well as ban on social and public gatherings by authorities of the states. While e-learning has been a practice in the advanced countries of the world, Nigeria have had challenges in the introduction and use of online platform for learning, despite her desire to introduce of technology as contained in its National Policy on Education.

Conclusion

Although digital learning is one alternative to bridge the gap in teaching and learning processes to mitigate the impact of the covid-19 pandemic, this paper concludes that Nigeria is yet to make frantic efforts at using appropriate technology and platforms for learning. The education system of Nigeria is besieged by a plethora of issues ranging from lack of capacity to introduce the use of technology in the learning process in her institutions, poor facilities, poor power supply, poverty among the citizens, and poor network from service providers to inability of students to access the internet.

This corroborates Tam and El-Azar (2020:3) who asserted that there is no reliable access to the internet, poverty on the part of the less-privileged resulting in their inability to purchase the required gadgets for e-learning. When classes are online, children from poor background lose out because of inability to bear the cost of digital devices and data plans. Restructuring the education system in Nigeria is necessary for the introduction, effective and efficient use of new approaches to ensure a continuous learning process in a period of pandemic such as the Covid-19.

Recommendations

There is the need for a strong motivation and favorable atmosphere for learning, made possible by the government through the provision of the necessary facilities to mitigate the learning calamity encountered as a result of the Covid-19 deadly disease.

Again, government should encourage network providers to ensure adequate and strong network signals to enhance the effective use of the internet for online studies, as there is the urgent need to adopt the appropriate technology. Indeed, the Pandemic has reminded Nigeria to invest in technology in the public and private schools' systems.

To achieve the government's desire to introduce information and communication technology into the school system, as contained in her National Policy on Education (FRN, 2004:5), high and effective collaboration between and among stakeholders such as the government, internet service providers, telecommunication industry, the private sector is required for innovative measures to diminish the catastrophic situation caused by the Covid -19.

The government should increase its budgetary allocation to the education sector to ensure adequate provision of the needed infrastructure for effective and efficient online learning and exposure of children of school age to computer appreciation, application and proficiency.

While Nigeria is yet to put facilities in place for effective e-learning, it is suggested that the school system should adopt a blended learning process, which involves a mix of the face-to-face and online learning. This suggestion is made to ensure the science and technology courses would not suffer severely in the post covid-19 era. These courses require students to use the science laboratories and workshops for practical classes that would not be possibly done online.

References

- Adeoye, I.A., Adanikan, A.F. &Adanikan, A. (2020). Covid-19 and E- learning: Nigeria Tertiary Education system experience. *International Journal of Research and Innovation in Applied Science*5(5) Pp. 28-31 www.rsisinternational.org
- Africa (2020). Africa Covid-19 stats. www.africanews.com
- Alase, A. (2017). The Evolution of Education in Nigeria: How has it impacted Ordinary Nigerians from Pre-independence till present? *International Journal of Education and Literacy Studies* 5(1) Pp. 69-72
- Andam, K., Edeh, H., Oboh, V., Pauw, K. and Thurlow, J. (2020). Estimating the Economic Costs of Covid-19 in Nigeria. Strategy Support Program working paper. www.ifpri.org
- Broom, D. (2020). Homeschooling during the coronavirus pandemic could change education forever, says the OECD. www.weforum.org
- Covid-19Coronavirus Pandemic (2020). Coronavirus Cases. www.worldometers.info/coronavirus
-

Federal Republic of Nigeria (2004). National Policy on Education (4th ed.). Lagos: NERDC

Jacob, O.N (2020). Impact of Covid -19 Pandemic School Close Down on the Research Programme of Higher institutions. *International Journal of Advances in Data and Information systems 1(1)* Pp.40-49. www.ijadis.org

Lenshie, N.E (2013). Politicization of Education in Nigeria: Implication for National Transformation. *Global Journal of GHuman Social Science Political Science* 13(5). Pp. 22-33. www.researchgate.net/publication

Li, C. and Lalani, F. (2020). The Covid-19 pandemic has changed education. www.weforum.org

Lu, J. (2020). Covid-19's Staggering Toll on Education around the World. <https://www.undispatch.com/covid-19s-staggering-toll-on-education-around-the-world/>

Nigeria (2020). Coronavirus cases. www.worldometers.info/coronavirus/country/nigeria

Obiakor, T. and Adeniran, A. (n.d). Covid -19: Impending Situation threatens to deepen Nigeria's Education Crisis. *Centre for the Study of the Economies of Africa*. www.africaportal.org

Okoroma, N.E (2006). Educational policies and problems of implementation in Nigeria. *Australian Journal of Adult learning* 46(2). Pp. 243-262. www.files.eric.ed.gov

Olaitan, A., Abdullahi, T.A., Ayodele, I.I., Irietiayo, A.R and Ogunjemilua, O.D (2020). Impact of Covid-19 on Education in Sub Saharan Africa. www.preprints.org

Osarenren-Osaghae, R.I and Irabor, Q.O (2018). Educational Policies and Programmes Implementation: A case study of education funding, universal basic education (UBE) and teacher education. *International Journal of Educational Administration and Policy Studies* 10(8). Pp. 91-102. www.researchgate.net

Schleicher, A. (2020). How can teachers and school systems respond to the Covid-19 pandemic? Some lessons from TALIS. www.oecd-forum.org

Stevens-Fulbrook, P. (2019). 15 learning theories in Education (A Complete Summary. www.teacherofsci.com

Taiwo, B.M (1999). History of education in Nigeria, its implication to educational management. A paper presented at the Nigeria Association for Educational medial and Technology (NAEMT) 21st Annual Convention (The Millennium Convention) on 30th August, - 3rd September, 1999. www.kwcoeilorin.edu.ng

Tam, G. and El-Azar (2020). 3 ways the Coronavirus Pandemic could reshape education. www.weforum.org