

## CHAPTER EIGHTEEN

### Digital Learning as Respond to the COVID-19 School Closure in Nigeria: Some Underlying Impediments

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#### **Abstract**

The restrictions caused by non-pharmaceutical interventions like social distancing have also impacted education at all levels, and will continue to do so for at least several months as learners and teachers are unable to physically meet in the schools and universities. Therefore, in respond to reduce the losses in learning time as a result of the COVID-19 school closure, many schools are now offering digital learning to their students. Against this background, this chapter examined the concepts of COVID-19 and digital learning. It equally discussed issues in digital learning as a respond to the COVID-19 school closure in Nigeria, as well as some underlying impediments to digital learning during the COVID-19 era in Nigeria educational system. Finally, it recommended that teachers should be trained and develop on digital learning, they should be exposed to the technicalities and pedagogical skills to integrate digital device in instruction as well as improved budgeting allocation to education.

**Keywords:** Digital Learning, COVID-19, School Closure, Issues and impediments

#### **Introduction**

Lockdown and social distancing as large-scale non-pharmaceutical interventions as a result of the COVID-19 pandemic has led to banning of large gathering, border closures and schools closure in Nigeria. These measures are geared towards isolating symptomatic individuals and their contact tracing. Besides, the fact remains that the forecasts of appropriate vaccine for the cure of COVID-19 shows that school could still remain close for several months. In this regard, Reimers and Schleicher (2020) stated that the restrictions caused by non-pharmaceutical interventions like social distancing have also impacted education at all levels, and will continue to do so for at least several months as learners and teachers are unable to physically meet in the schools and universities. Reimers and Schleicher (2020) stressed that these limitations in the ability to meet during a protracted pandemic will likely limit opportunities for students to learn during the period of social distancing and closure of schools, at all levels of education. The measures adopted to ensure social distancing and school closure concern more than 1,576,021,818 students in 188 countries (Nigeria inclusive) (Trade Union Advisory Committee, (TUAC), 2020).

Essentially, as the non-pharmaceutical measures if adequately adhere to by all (including students' population) may succeed in reducing or bringing to an end the velocity of the COVID 19 infection, the expectation is that there will be great disruption in educational opportunities among students.

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The United Nations (UN) (2020) noted that the potential losses that may accrue in learning for today's young generation, and for the development of their human capital, are hard to fathom.

Therefore, in respond to reduce the losses in learning time as a result of the COVID-19 school closure, many schools are now offering digital learning to their students and Reimers and Schleicher (2020) also observed:

*Schools responded very rapidly, establishing remote contact (digital learning) with their students. They developed a support network with guidance for the preparation of online classes, organizational matters, and making available a wide array of free open content resources. P. 13*

The essence is to ensure a pedagogical continuity and to maintain regular contact between the students and their teachers on regular basis via digital workspace and tools such as zoom crowd, youtube, seesaw, moodle, Microsoft one note, google hangout, e-mail, virtual classroom, video tutorial among others. While digital learning is appropriate to mitigate for learning lost during the period of school closure due to the COVID-19 pandemic, infrastructure (platforms and education resources) and familiarity with them seem to be driving success of delivery learning to all students. However, the big challenge posed in this context is sustaining the initiative. Reimers and Schleicher (2020) puts it this way: teaching has been shifted to digital learning. The federal and state government tries to give support for this to schools and teachers but most of the initiatives seem to be bottom up.

It is, therefore, necessary to address the shift to digital learning as a response to the COVID-19 school closure in Nigeria. This chapter, therefore, focuses on (1) concepts of COVID-19, (2) concept of digital learning (3) importance of digital learning (4) issues in digital learning as a respond to the COVID-19 school closure in Nigeria, (5) some underlying impediments to digital learning during COVID-19 era in Nigerian Education System and (5) the way forward.

### **Concept of COVID-19**

COVID-19 stands for corona virus disease 2019. Corona viruses are a family of viruses that cause illnesses ranging from the common cold to more severe diseases such as severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) (World Health Organization (WHO) in Ogunode, Abigael & Lydia, (2020). According to the Congressional Research Service (2020) the World Health Organization (WHO) first declared COVID-19 a world health emergency in January 2020. The virus was first diagnosed in Wuhan, China and has spread to over 190 countries (Nigeria inclusive). In early March, the focal point of infections shifted from China to Europe, especially Italy, but by April, 2020, the focus shifted to the United States, where the number of infections was accelerating and with the thousands of fatalities (Congressional Research Service, 2020). Significantly, on 27<sup>th</sup> February, Nigeria confirmed its first case of COVID-19 in Lagos State. An Italian citizen who works in Nigeria had returned on 25<sup>th</sup> February from Milan, Italy through the Murtala Muhammed International Airport, fell ill on 26<sup>th</sup> February and was transferred to Lagos State Biosecurity Facilities for isolation and testing (Ogunode, Abigael & Lydia, 2020). As at 11<sup>th</sup> August, 2020, Nigeria is having 46,867 cases of COVID-19. In order to

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contain the spread of the virus in Nigeria, the government imposed travel restrictions, border closure, ban in large social gathering and school closure as ways to isolate symptomatic individuals and their contact tracing. In fact, the Federal Ministry of Education directed all educational institution in Nigeria to shut down and allow students to remain at home as cases of COVID-19 accelerate. Thus, Nigeria joined the rest of the world and the growing list of African countries that have closed schools at all levels.

**Concept of Digital Learning**

Digital learning also known as remote learning or online learning is the use of appropriate hardware, software and a high-speed internet connection to communicate learning materials effectively to schools in their homes. Digital learning involves the supply of students with teaching materials and instructs students directly via remote digital tools (Trade Union Advisory Committee, (TUAC), 2020). The TUAC equally referred to digital learning as “home-schooling” in the media. The TUAC further maintained that digital learning is closer to distance learning since teachers and schools still remain responsible for the learning content and outcome. Reimers and Schleicher (2020:25). Have identified some digital learning platforms to include:

1. Google, Google classroom, Google suite, Google Hangout, Google meet
2. Facebook
3. Microsoft one note
4. Microsoft SEQTA, education perfect
5. Google Drive/Microsoft Teams
6. Moodle
7. Zoom
8. Seesaw
9. ManageBac
10. Ed Dojo
11. EdModo
12. Youtube
13. Youtube, Obscohost, progentis
14. PhET
15. Screencostly
16. RAZ Kids

Other relevant and appropriate digital learning platforms include

1. E-mail
2. Whatsapp
3. Virtual classroom
4. Twitters
5. Instagram

Moreover, there are digital learning infrastructure to ensure effective content delivery and student instruction. They are computers, tablets, mobile gadgets, high broadband and printing facilities.

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The United Nations Educational, Scientific and Cultural Organization (UNESCO (2020) have identified the tips for providing digital (remote) learning. They are:

1. Assess the capabilities of students, teachers, and infrastructure to adopt high-technology and low technology solutions.
2. Explore various options for distance learning tools including online lessons, downloadable lessons, Moocs, mobile-phone and social media blasts, accessible material for students for example using screen readers.
3. Radio and television programmes useful in particular for younger students and their caregivers.
4. Prioritize subjects and grades that are associated with exams that are perceived as high stakes by parents (if possible)
5. Train teachers how to instruct and engage all students through distance learning tools.
6. Appreciate that distance learning is not interactive and work within that framework. Keep time and track of student engagement, possibly through WhatsApp groups.
7. Blend appropriate approaches and limit the number of applications and platforms. Not all tools are adaptable to all country contexts.
8. Emphasize tools that are compatible with smartphones as they might be more widely available.
9. Engage in agreements with telecoms to eliminate cost of accessing resources for MoE sites.
10. Create support communities among teachers and students to cross-reference questions and solutions.
11. Ensure accessibility and availability of education services for students with disabilities.

### Importance of Digital Learning

Digital learning facilitates the task of the teacher by promoting performance-enhancing independent study among students. It enables teachers and students to study at their own pace and convenience (Anowor, 2010). According to him, digital learning liberates teachers and students from the restrictions of space, time and physical facilities while promoting independent study aided by advances in modern computer technology. Anowor, (2010) noted that self-paced digital learning models enables students to attain educational objectives at their own pace while saving the teacher the trouble of slowing down the pace of lesson delivery in order to accommodate slow learners. In essence digital learning facilities access to existing knowledge and skills by allowing teachers and students to search out desired material from a vast reservoir of knowledge and skills through the assistance of the computer and digital tool (software) platforms like zoom-crowd, whatsapp, facebook, etc. Therefore, digital learning process serves the teacher and the learner a huge amount of energy and time that would have been spent in the use of conventional procedures.

### Issues in Digital Learning as a Respond to the COVID-19 School Closure in Nigeria

In looking at digital learning as a respond to the COVID-19 school closure in Nigeria, this work may necessarily look at some crucial issues surrounding the adoption of such educational platforms and resources. These crucial issues include

1. **Readiness of students to learn online:** To start with the very basics, that is, the digital learning tools to key into and participate in on-line learning. The digital learning tools ranged from functional computers, tablets, mobile gadgets, high broadband and printing facilities. While in Denmark, Slovenia, Norway, Poland, Lithuania, Iceland, Austria, Switzerland and the

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Netherlands over 95% of students have a computer to use for their online study at home, it is only 34% in Indonesia (Reimers & Schleicher, 2020). In Nigeria, the internet connectivity and penetration is still very low not to talk of the number of students who own the right digital resources that suggest their readiness to learn online.

2. **Preparedness of Teachers:** On the other side of the equation, how well are teachers prepared and skilled in use of digital resources to teach online. This is because the success of many students in their academic work/learning for the several months of the school closure that teachers will engaged in online teaching will definitely promise on the teachers digital learning skills to facilitate and ensure close relationships via various platform with their students.
3. **Preparedness of Schools:** Another critical issue is the level of preparation of the schools. This entails how equipped schools with digital learning resources and their level of accustom to online teaching and learning. This suggests that there must be major state of the art technology in schools to indicate how prepared they are toward digital learning in the period of the COVID-19 crisis.
4. **Availability of the Required Digital Learning Technology:** There was a time Nigerian educational system witnessed appreciable improvement in the distribution of computers to school at all levels. Even at that, what is the computer student ratio in Nigeria from 2010 to 2020? In response to this question, Alumode (2013) emphatically stated that there is inadequate, low quality and in some cases outright non-availability of ICT infrastructure for teaching, learning and educational administration. According to Reimers and Schleicher (2020) the largest increases in the average of computers per 15 years-old student were observed in Estonia, Iceland, Lithuania, Luxemburg, Sweden, the United Kingdom and the United States during the lockdown, social distancing and school closure. This picture may be far away from the situation in Nigeria.
5. **Adequacy of Digital Learning Technology:** The availability of digital learning technology in Nigeria schools does not suggest their adequacy. In terms of adequacy, we judge by the sufficient of digital learning devices in schools in Nigeria. Even in schools where these devices seem adequate in appearance, but are they sufficiently powerful in terms of their working capacity. Take for instance, in Nigeria schools, the internet brand-width and speed seem poor and fluctuating on regular basis. The same gory picture present itself when it comes to the adequacy of the require software to drive the digital learning in the period of COVID-19 crisis.

### Some Underlying Impediments to Digital Learning During COVID-19 Era in Nigerian Educational System

Various factors could combine to militate against digital learning in COVID-19 era in Nigerian educational system. These factors include:

1. **Formal knowledge of Use of Digital Learning Devices Effectively:** There is lack of formal training for teachers and students on digital learning. Certainly, there was little to no time to adapt learning methods, prepare teachers and students on use of digital learning devices before

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the closure of schools. Thus, a lot of students and schools/teachers are not prepared for digital learning systems to be fully put into use in teaching and learning (TUAC, 2020). Furthermore, teachers and school heads familiarity and knowledge of how to use digital learning tools and processes are very critical in providing digital learning in schools. For example, Singapore had rolled out training for teachers on provision of classes online in anticipation of school closure (UNESCO, 2020).

2. **Technical and Pedagogical Skills to Integrate Digital Devices in Instruction:** Technology is only as good as its uses. As stated by Alumode (2013) most teachers are not at the cutting edge of ICT and digital innovation. Alumode (2013) stated that although capacity-building of teachers on ICT and digital innovation is going on, a higher percentage of teachers at all levels are largely non-ICT and digital literate. An indication that many teachers may not have the technical and pedagogical skills to integrate digital devices in instruction in Nigerian school during this COVID-19 pandemic.
  
3. **Problem of Teacher Resistance to Digital Learning:** Some teachers at all levels of education still feel threatened by the digital learning devices such as computers, tablets highbroad band, etc. and platforms like Google classroom, Google suite, Microsoft one note, Moodle, Zoom, Seesaw, etc. As a result, many are unwilling to utilize it as a teaching tool even in the period the schools adopt digital learning due to the COVID-19 pandemic. In this regard, Alumode, (2013) succinctly stated that:
 

*If those machines (devices and platforms) are to supplement classroom learning, the teachers themselves must be willing and be able to use them in order to encourage their use by students. If teachers do not realize the potential benefits of computers both for themselves and for their students, the available packages and equipment will never be effective as teaching tools. P. 7.*
  
4. **Funding:** Strategies taken to encourage digital learning in schools during the COVID-19 crisis are constrained by under-funding and inadequate financial resources. This is because most of the digital learning resources and devices, as well as, the motivation of the human resources depend on availability of fund. The fund for provision of the need devices and resources and motivation of the teachers are not enough. This in turn may affect the content and instructional delivery via the online learning. This is attested to by the Federal Republic of Nigeria (2010) that although there is a gradual improvement in the funding of ICT (and digital innovation) in education, the funds are largely inadequate to provide the sector appropriately for the attainment of the national vision. Table 1 confirms this situation.

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**Table 1:** Federal Government Budgetary Allocation to Education 2009-2020

Year	Budget	Education Allocation (Billion)	Percentage
2009	3.049 trn	N221.19 bn	7.25
2010	5.160 trn	N249.09 bn	4.83
2011	4.972 trn	N306.3 bn	6.16
2012	4.877 trn	N400.15 bn	8.20
2013	4.987 trn	N426.53 bn	8.55
2014	4.962 trn	N493 bn	9.94
2015	5.068 trn	N392.2 bn	7.74
2016	6.061 trn	N369.6 bn	6.10
2017	7.444 trn	N550 bn	7.38
2018	8.612 trn	N605.8 bn	7.03
2019	-	N260.5 bn	7.05
2020	10.33 trn	N671.07 bn	6.7

*Source: Mukoro, S.A. (2020) Implementing and Managing the Weak Spots of Local Sources of Income in Universities in Delta and Edo States, Nigeria.*

From the above table it is obvious that Nigeria has never spent up to the 26% of annual budgetary allocation to education as recommended by UNESCO.

### The Way Forward

1. **Training and Development:** Teachers should be train and develop on digital learning. This should entail updating them on the tools and use of digital content and delivery methods. This can be achieved by:
  - a. Enriching the environment for teaching and learning;
  - b. Regular mandatory professional development of core ICT teachers and administrators;
  - c. Continuous ICT training including content development and delivery for all staff;
  - d. Periodic review of the curricular, in line with the National Information Technology Education Framework (NITEP), to reflect emergency paradigms and national goals;
  - e. Promoting ICT proficiency with special focus on children, women and the physical challenged; and
  - f. Carrying out needs assessment to identify skill gaps and encouraging the acquisition of appropriate ICT skills to mitigate the gaps (Alumode, 2013).
2. **Teachers Exposure:** Teachers should be expose on regular basis through research and development how they can use their technical and pedagogical skills to integrate digital devices in instruction.
3. **Improved Budgetary Allocation to Education:** Government should increase budgetary allocation to education in line with the 26% of the annual budget as suggested by UNESCO. Besides, schools should partner with development agencies or partners for fund ICT and digital innovative resources in education.

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### **Conclusion**

In this chapter, we saw that the COVID-19 crisis has result in closure of schools at all levels in Nigeria. We also saw that schools rapidly responded via digital learning to ensure pedagogical continuity and maintenance of regular contact between the students and their teachers on regular basis through remote learning as “home-schooling”. Therefore, digital learning is very important for the minimizing of learning losses, aiding learning rate of students, facilitating retention and stimulating student’s attitude towards learning, etc. Since this is so, it behaves the authors to look at some critical issues that surround the adoption of the digital learning mode as a respond to the COVID-19 crisis in Nigerian education system, as well as, as some underlying impediments that militate against digital learning in COVID-19 crisis.

### **Suggestions**

1. The Federal and State Government should provide schools the infrastructure for digital learning, an investment which is likely to have benefits that extend well beyond the environment COVID-19 predicament.
2. Digital learning cannot be effective without proper funding, therefore adequate and proper financing of the digital devices is highly recommended. The government may not be able to do this alone; therefore, there should be a joint effort of the government, donor agencies, community, philanthropies and non-governmental organizations.
3. The three tiers of government, the Federal, State and Local government should provide special grants and allocation for training and development programme for teachers on digital learning and delivery methods.
4. Digital learning research and development centres should be set up in every zonal Ministry of Education in each local government areas in Nigeria where teachers are exposed to the technical and pedagogical skills to integrate digital devices in instruction. The digital learning research and development centres should be relevant to teachers on use of various hardwares (computers, tablets etc) and software tool/platform to delivery learning content and materials.
5. The Federal and State Government should provide technical assistance and digital tools to teachers and schools.

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