



## Online Learning During COVID-19 Pandemic In Africa: A Wake-Up Call On The Educational Sector

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### ABSTRACT

The novel coronavirus disease 2019 (COVID-19) pandemic which emanated from Wuhan city, China and its successive spread across the globe has made a tremendous impact on virtually all spheres of human endeavors; ranging from economy, health, livelihood, and education amongst others. The widespread restrictions currently placed on movement and mass gatherings have made educational and academic activities be restructured to a pedagogical order. In recent times, the concept of learning has gradually transitioned from traditional classroom methods to online learning where students acquire knowledge through "hybrid". Most institutions of learning in Africa may encounter difficulties in migrating to this new form of learning due to the lack of information and communications technology (ICT) facilities of international standards. As of today, many students possess internet-enabled devices, yet cannot access the internet as a result of unaffordable data subscriptions, which has made most learners result in using their devices for non-educational purposes. As the COVID-19 pandemic continues to ravage the African continent returning to its former modus operandi by African schools is a herculean task. Thus, governments, authorities, and regulatory bodies in individual countries must improve their existing ICT and infrastructures for a better online learning experience. This paper serves as a wake-up call for Africa and its educational sector to establish online learning.

**Keywords:** Africa; COVID-19; Online learning; Education; Pandemic

## Afrika'daki COVID-19 Salgını Sırasında Çevrimiçi Öğretim: Eğitim Sektörüne Uyandırma Çağrısı

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### Öz

Çin'in Wuhan şehrinde başlayan ve tüm dünyaya yayılan yeni koronavirüs hastalığı (COVID-19) pandemisi, insan çabalarının neredeyse tüm alanlarında muazzam bir etki yarattı; ekonomi, sağlık, geçim kaynakları ve diğerlerinin yanı sıra eğitim değişmektedir. Halihazırda hareket ve kitlesel toplantılara getirilen yaygın kısıtlamalar, eğitim ve akademik faaliyetlerin pedagojik bir düzene göre yeniden yapılandırılmasına neden olmuştur. Son zamanlarda, öğrenme kavramı kademeli olarak geleneksel sınıf yöntemlerinden öğrencilerin "hibrit" yoluyla bilgi edindiği çevrimiçi öğrenmeye geçiş yaptı. Afrika'daki çoğu eğitim kurumu, uluslararası standartlarda bilgi ve iletişim teknolojisi (BİT) olanaklarının olmaması nedeniyle bu yeni öğrenme biçimine geçişte zorluklarla karşılaşabilir. Bugün itibarıyla, pek çok öğrenci internet özellikli cihazlara sahip olmasına rağmen, çoğu öğrencinin cihazlarını eğitim dışı amaçlarla kullanmasına neden olan uygun fiyatlı veri aboneliklerinin bir sonucu olarak internete erişemiyor. COVID-19 salgını Afrika kıtasını kasıp kavurmaya devam ederken, Afrika okulları tarafından eski işleyiş biçimine geri dönmek zorlu bir görevdir. Bu nedenle, tek tek ülkelerdeki hükümetler, yetkililer ve düzenleyici kurumlar, daha iyi bir çevrimiçi öğrenme deneyimi için mevcut BİT'lerini ve altyapılarını iyileştirmelidir. Bu makale, Afrika ve eğitim sektörünün çevrimiçi öğrenmeyi kurması için bir uyandırma çağrısı görevi görüyor.

**Anahtar sözcükler:** Afrika; COVID-19; Çevrimiçi öğrenme; Eğitim; Pandemi

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The emergence of the new coronavirus disease 2019 (COVID-19) in Wuhan city, China, and its successive spread across the globe have strongly affected all spheres of human endeavors <sup>1</sup>. Africa has had its fair share of the pandemic with a total of 12,119,498 confirmed cases and a total of 256,128 mortalities recorded as of 10th December 2022 <sup>2</sup>, and there are fears of a monumental increase in cases if utmost care is not taken <sup>3-7</sup>. This has led to the widespread imposition of various forms of restrictions on human movement and lockdown on social, religious, economic and educational activities across many communities and cities globally <sup>6-8</sup>. Some of the public health safety strategies employed to reduce mass gatherings in most countries are the enforcement of social and physical distancing which is one of the mitigative measures recommended by the World Health Organization (WHO) <sup>9,10</sup>. With these restrictions, institutions of learning are also temporarily shut down as a measure to curtail the spread of the virus <sup>9</sup>. School closure implies that learners at all levels of education, ranging from primary to tertiary institutions are out of school <sup>11</sup>. Even with the present state of vaccination in Africa, hybrid learning and the application of platforms for assessment are being employed by many institutions to ensure learners are engaged as well as cover their courses and curricula.

In recent years, the concept of learning has steadily metamorphosed from traditional classroom methods to distance learning and now online learning. Online learning can be defined as an electronic learning system where students can acquire or gain knowledge at any time or location on the internet <sup>12</sup>. This form of learning in which students acquire knowledge through “invisible classrooms” is gradually evolving <sup>13</sup>, and entails learning from information disseminated electronically via online courses, online discussion forums, and video conferencing, amongst others <sup>14</sup>. Modern platforms for online learning include Zoom meetings, WeTransfer, Google classroom, Adobe Captivate, Facebook, and Youtube amongst others <sup>15,16</sup>. Worthy of note is that most privately-owned institutions of learning in the African continent are taking the lead in championing the course of this transition <sup>17</sup>. However, the percentage of the entire private-owned tertiary institutions of learning in Africa, specifically in Nigeria (about 6%) is very low compared with the public or government-owned counterparts which account for the remaining 94% <sup>18,19</sup>. This low composition directly translates to a low students intake and an overall population of learners in these institutions <sup>20</sup>. The possible effects of the restrictions of social activities and human movement on academic and educational activities have been a major concern for the entire academic community in Africa; comprising of teachers, learners, and parents <sup>18</sup>. Several factors such as inadequate funding, lack of infrastructure, and industrial actions by academic staff may pose a challenge to the educational system <sup>20</sup>.

The challenges of the COVID-19 pandemic on our educational system are notable with far-reaching effects. However, this should not be a major source of concern if

most of our African institutions of learning are equipped with state-of-the-art information and communications technology (ICT) facilities of international standards. As of today, the majority of learners in various institutions of higher learning in Africa namely Nigeria, Senegal and South Africa possess internet-enabled devices but are unable to access the internet <sup>21</sup>. Poor access to quality internet connection coupled with very expensive data subscriptions has led to limited users for online learning. This has made most learners result in using their devices for non-educational purposes such as watching videos, playing games, taking photographs, and engaging in other social vices <sup>22</sup>. By so doing, the device that could be channelled for educational purposes and academic pursuit is now a source of distraction which may negatively affect academic performance.

The non-availability of quality internet access has not only affected the students but also educators <sup>23</sup>. Academic and educational activities in most developed countries are least affected by this lockdown and movement restrictions due to the presence of quality internet access at their disposal, thus making the transition to online learning easier and sustainable <sup>24</sup>. However, the reverse is the case for most of Africa's institutions of learning whose academic activities have been grounded due to the COVID-19 pandemic. Despite the availability of ICT facilities in some government or public-owned schools created for learning purposes, the majority have either become moribund or non-functional. However, the few functioning ones are grossly limited in capacity and overwhelmed.

As multiple containment strategies and efforts for combating this pandemic are currently ongoing, the possibility of easing movement restrictions and returning to normalcy in most African countries is not feasible in the coming weeks. Therefore, academic activities should be re-activated by transiting to online learning. To achieve this great feat, it is strongly recommended that government at all levels should ensure that they provide quality internet access and connection to the general public, especially to the educational sector.

The creation of distance learning institutions as seen in some African countries is worthy of note. A classical example is the National Open University of Nigeria (NOUN), where thousands of students have access to University education via electronic learning usually by downloading learning materials online <sup>25</sup>. This mode of learning even though applauded; however, is limited because lectures are not presented online in real-time and are not interactive. It is also usually marred with several hiccups such as logistics, management, and technical deficiencies in its operations <sup>26</sup>.

No doubt, the entire African continent is in dire need of workable alternatives to the traditional and conventional teaching method in the face of a scourging pandemic. Thus, this is a wake-up call to Africa and its educational sector, as it is now expedient for the government, authorities, and regulatory bodies in individual countries to improve their existing ICT

infrastructures and educational facilities. This can be achieved via upgrading and developing modern and state-of-the-art technology to be used in online teaching following international standards and best global practices. The government should also ensure there is unrestricted access to quality and affordable internet connection which will not only help the education sector, but other valuable sectors such as health, commerce, agriculture, transportation, production, and manufacturing amongst others.

Furthermore, governments of African nations should also ensure mutual partnership with internet service providers and academic institutions to encourage online learning even after the pandemic is over and life has been restored to normalcy. Quality internet access and an uninterruptable power supply are necessities that must be made available and affordable for the public for the smooth running of online learning. For better dissemination of information and learning instructions to learners, subjects could be introduced and taught in different languages of instruction or local dialects.

**In conclusion**, there are lots of challenges associated with transitioning from conventional learning to online learning, therefore; for online learning to be effective and efficient, all major stakeholders including government, educators, and parents should be awake and aware of their responsibilities.

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#### Authors' contributions

OAO conceptualized the work. AOA, OIO, and TC prepared the first draft of the manuscript. All authors revised, proofread, and approved the final version of the manuscript.

## References

1. World Health Organisation (WHO). Rolling updates on coronavirus disease (COVID-19). 2020. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen> (Accessed on July 2, 2020)
2. Africa CDC. Africa CDC Dashboard. 2020. Available from: <https://africacdc.org/covid-19/> (Updated November 22, 2022). (Accessed on December 10, 2022)
3. Chia, T, Oyeniran OI. Will Africa experience a spike in COVID-19 cases? *Asian Pac J Trop Med* 2020;13(7):285-287.
4. Oyeniran OI, Chia T. Novel Coronavirus disease 2019 (COVID-19) outbreak in Nigeria: how effective are government interventions? *Ethics Med Public Health* 2020;14:100515.
5. Oraebosi MI, Chia T, Oyeniran OI. Preparing the Next Generation of African Healthcare Workers and Scientists: Lessons from Coronavirus Pandemic. *Ethics Med Public Health* 2020;14:100535.
6. Oyeniran OI, Chia T, Oraebosi MI. Combating Covid-19 Pandemic In Africa: An Urgent Call To Scale Up Laboratory Testing Capacities. *Ethics Med Public Health* 2020 Jun 26. doi: 10.1016/j.jemep.2020.100552. [Epub ahead of print].
7. Oyeniran OI, Chia T. Lutte contre la pandémie de maladie à coronavirus (Covid-19): tirer les leçons de la réponse à la maladie du virus Ebola. *Ethics Med Public Health* 2020 Jul 3. doi: 10.1016/j.jemep.2020.100558. [Epub ahead of print].
8. Ajagbe AO, Onigbinde OA, Oyeniran OI, Chia T. Mental Morbidity Arising From Social Isolation During Covid-19 Outbreak. *Ulutas Med J* 2020;6(2):97-100.
9. Chia T, Oyeniran OI. Human Health versus Human Rights: An Emerging Ethical Dilemma Arising From Coronavirus Disease Pandemic. *Ethics Med Public Health* 2020;14:100511.
10. Nigeria Center for Disease Control (NCDC). Self Isolation & Quarantine Guide. 2020. Available from: [https://covid19.ncdc.gov.ng/media/files/Selfisolation\\_QuarantineGuide.pdf.pdf](https://covid19.ncdc.gov.ng/media/files/Selfisolation_QuarantineGuide.pdf.pdf) (Accessed on July 5, 2020).
11. UNESCO. Half of world's student population not attending school: UNESCO launches global coalition to accelerate deployment of remote learning solutions. 2020. Available from: <https://en.unesco.org/news/half-worlds-student-population-not-attending-school-unescolaunches-global-coalition-accelerate>. (Accessed on July 4, 2020)
12. Shabha G. An Assessment of the effectiveness of e-learning on university space planning and design. *Facilities* 2004;22(3/4):79-86.
13. Tham CM, Werner JM. Designing and evaluating e-learning in higher education: A review and recommendations. *J Leadersh Organ Stud* 2005;11(2):15-25.
14. Cappel JJ, Hayen RL. Evaluating e-learning: A case study. *J Comput Inform Syst* 2004;44(4):49-56.
15. Dalton W, Turner B. Best online learning platforms of 2020: LMS and VLE for education. 2020. Available from:

<https://www.techradar.com/best/best-online-learning-platforms>. (Accessed on July 5, 2020)

16.Hodges C, Moore S, Lockee B, Trust T, Bond A. The difference between emergency remote teaching and online learning. 2020. Available from: <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning> (Accessed on July 4, 2020)

17.Pande SK. Enhancing Learning opportunities through Development of Open and Distance Education in Africa. In *Optimizing Open and Distance Learning in Higher Education Institutions*. edited by Pandey UC, and Indrakanti V. Hershey, PA: IGI Global, 2018. pp. 71-95. <http://doi:10.4018/978-1-5225-2624-7.ch004>

18.Nigerian Universities Commission (NUC). Private universities account for less than 6% of Nigerian students population. Premium Times 2018. Available from: <https://www.premiumtimesng.com/news/more-news/275650-private-universities-account-for-less-than-6-of-nigerian-students-population-nuc.html>. (Accessed on July 6, 2020).

19.Chia T, Oyeniran OI. Determining the anatomy of anatomy educators. *J Taibah Univ Med Sci* 2020;15(2):102-109.

20.Chia T, Oyeniran OI. Anatomy education in Nigeria: Challenges and prospects. *J. Contemp. Med. Educ* 2019;9(3):61-65.

21.Juma C, Moyer E. Broadband internet for Africa. *American Association for the Advancement of Science* 2008;320(5881):1261. doi: 10.1126/science.1161105.

22.Aduwa-Ogiegbaen SE, Iyamu EO. Using information and communication technology in secondary schools in Nigeria: Problems and prospects. *J Educ Techno Soc* 2005;8(1):104-112.

23.The Edvocate. The absence of internet at home is a problem for some students. 2017. Available from: <https://www.theedadvocate.org/the-absence-of-internet-at-home-is-a-problem-for-some-students/> (Accessed on July 5, 2020)

24.LE VPN Blog. Top 10 countries with the fastest internet speeds. 2018. Available from: <https://www.le-vpn.com/top-countries-fastest-internet-speeds/>. (Accessed on July 5, 2020)

25.noun.edu.ng (homepage on the internet). National Open University of Nigeria (NOUN). Brief historical background of NOUN. Available from: <https://www.nou.edu.ng/page/university-you-0> (Accessed on July 3, 2020).

26.Asunka S. Online learning in higher education in Sub-Saharan Africa: Ghanaian University students' experiences and perceptions. *International Review of Research in Open and Distance Learning* 2008;9(3):1-23.