**E-learning, Coronavirus Pandemic & Polytechnic Education in Nigeria: The way forward**

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**ABSTRACT**

E-learning is an internet multi-media activity compatible with the traditional face-to-face learning process. An integrated & blended e-learning approach (virtual) using online tools was adopted for polytechnic education in Nigeria polytechnics as a result of COVID-19 pandemic that crippled the hitherto face-to-face classroom learning. E-learning received limited success as a novel means of learning in polytechnics in the country. Absence of ICT technology, funding, infrastructure, flexibility and personnel were identified as factors hindering the application of e-learning in polytechnics.

Keywords: E-learning, multi-media, traditional face-to-face learning, COVID-19, ICT Technology.

**INTRODUCTION** For the global community generally, the outbreak of the COVID-19 virus was a jolt from the blues. It reminds one of wild-fire in the harmattan season. In Europe and America, people of varying social status and profession were dying in thousands as a result of the disease. Worse hit were countries like Italy, France and the United States that recorded thousands of deaths in the first few weeks of the outbreak. Other countries followed suit. According to the World Health Organisation, (WHO) website ([https://www.who.int/news-room/detail/27-04-2020-who-timeline---COVID-19](https://www.who.int/news-room/detail/27-04-2020-who-timeline---covid-19)) the virus surfaced in Wuhan, Hubmei province on December 31 2019. WHO however declared it a global pandemic on March 11 2020. Government globally responded to the virus pandemic by shutting down all social and economic activities through LOCKDOWN to prevent the spread of the deadly virus. Citizens were directed to stay at home to avoid contracting the deadly virus. Cities globally became completely deserted and akin to a ghost town. The crises the pandemic triggered was phenomenal – food shortages, economic recession, etc.Teaching and learning in tertiary institutions globally became instantly crippled as a result of the COVID-19 virus pandemic. The federal government of Nigeria through the Minister of Education closed down all schools in the country on April 23, 2020 to protect the lives of students. Virtual (online) learning replaced conventional classroom learning in advanced countries. Nigeria tertiary institutions attempted to do the same through the directives of the Hon. Minister of Education on April 2, 2020 in a meeting with heads of federal tertiary institutions in the country – Vice-Chancellors, Rectors and Provosts; Adupetun, Lawal (2020). Virtual (online) or e-learning is a welcomed development in polytechnics in Nigeria that form the bulk of tertiary institutions in the country. Polytechnics in Nigeria closed down because of the outbreak of coronavirus, but lectures in both theory and practice had continued in schools in Europe and America unabated because they were long e-learning compliant. In fact, some tertiary institutions specialise exclusively in e-learning or online (virtual) campus trend. The timeless beauty of e-learning is that it forecloses physical contact between lecturers and students except through a dedicated internet website for that purpose – boards, zoom, wiki, blogs, teleconferencing, where students log in for lectures and interaction with other students, etc.

The websites are online multi-media compatible with the traditional face-to-face classrooms which serve as an interactive link between students and lecturers. Nigeria’s polytechnics were caught napping as a result of the sudden need and switch to e-learning mode triggered by the coronavirus global pandemic. Virtually all the polytechnics in the country were not prepared for the switch as they lack the basic infrastructure for its realisation. A gap is hereby created between what is actually on the ground in polytechnics to ensure hitch-free e-learning and what ought to have been on the ground for purposeful, efficient and effective learning that meets global standards and expectations. The above problem is, therefore, the subject of this research work – *E-learning, Coronavirus Pandemic & Polytechnic Education in Nigeria – the way forward.*

**THEORETICAL CONCEPT** As already known, a theory is a set of statements, principles and ideas that relate to a particular subject. A theory attempts to describe, explain and or/predicts phenomenon. According to Owuamalam (2011, p. 78), a theory is a set of related propositions that present a systematic view of a phenomenon by specifying relationships among variables.Theories of learning, according to Picciano (2017, p. 166) is multi-disciplinary, complex, extensive and traverses psychology, sociology, neuroscience and education. The basic ones are behaviourism, cognitivism and social constructivism. Online learning is a sub-set of learning in general. The most appropriate theory for online learning is the multimodal model or theory propounded by Picciano (2017, p. 186). It incorporates, integrates and blends theories of learning with online theory. Accordingly, behaviourists will find elements of self-study and independent learning in adaptive software. Cognitivists might appreciate reflection and dialectic questioning as important elements of the model. Social constructivists will welcome the emphasis on community and interaction throughout the model. Connectivists might value the collaboration and the possibility of student-generated content. The most significant element of the model is its flexibility and ability to expand as new learning approaches, perhaps spurred by advances in technology.

**OVERVIEW OF E-LEARNING** As a result of COVID-19 virus pandemic raving the global community that kept tertiary institutions in the country locked down indefinitely, the federal government through the Hon. Minister of Education, Adamu Adamu on April 2, 2020 in a meeting with 237 Vice-Chancellors, Rectors and Provosts of tertiary institutions directed them to commence online lectures for students, Adepetun, Lawal (2020, p. 1). Polytechnics in Nigeria as directed reverted to e-learning for teaching in Nigeria, which is also in tandem with global best practices. E-learnng is opposed to the traditional face-to-face teaching mode in classrooms with its advantage of physical interaction between the lecturers and students.According to (<https://www.affordablecollegesonline.org/college-resource-center/e-learning-guide/>) the basic idea behind e-learning is to provide education to students who either cannot or choose not to be present in a traditional classroom setting, the manifestation of online programmes varies so extremely that a precise image of e-learning can be hard to pinpoint. Understanding the most common online education providers (and their teaching methods) can make it easier to determine what type of e-learning is ideally suited for polytechnic students in the country.

E-learning providers globally were identified as Non-Profit Universities, Massive Open Online Courses, (MOOC), Community Colleges and Vocational Schools, Professional Development Platforms and For-Profit universities.

A platform for e-learning are boards, blogs, wiki and teleconferencing. They, however, do not exist in water-tight compartments. They overlap, blend or are hybrid of one another. All function as multi-media – making use of video, audio, text, photographs and graphics.

**DIFFERENCE BETWEEN E-LEARNING AND ONLINE LEARNING** E-learning, according to (<https://www.eztalks.com/elearning/difference-between-elearning-and-online-learning.html>) is a form of learning in which the student and the teacher interact online. There is, therefore, a dedicated online hosted website for the particular students to log on. In this form of learning, the students take a course from the teacher without physically visiting an actual classroom with him. Both of them communicate and learn the courses online even if they are on the same premise. Though students can use offline materials like paper to send their response, they are connected with their teacher through an internet connection ONLY. They can send a picture of their response online to their teacher.Online learning, on the other hand, is aimed at getting learning experience by using an internet connection. The students have to use certain techniques to get this learning experience. In other words, online learning can be described as the combination of blended learning and e-learning as it generally uses online tools like ezTalks, Cloud Meeting, etc, for learning the course.E-learning allows the students to interact with their teacher only through the internet. They cannot learn or communicate with their teacher if they are not in the same premises. Online, on the other hand, allows the students to use a [virtual conferencing software](https://www.eztalks.com/video-conference/virtual-conferencing-software.html) like ezTalks, zoom, Cloud Meeting, etc, to interact with their teacher face-to-face along with learning online through the internet.

**POPULAR E-LEARNING PLATFORMS ONLINE** According to Lee (2020) the potentials in the e-learning industry is huge. By 2022, the size of this industry shall amount to a whopping $243 billion. It all now boils down to choosing the best e-Learning platform to host your courses. E-learning platforms abound. Here's the list of 10 common e-learning platforms, according to Lee (2020).

### 1. Udemy Udemy firmly believes in disrupting and democratising educational ecosystem by allowing anyone and everyone to learn from its pool of more than 20000 Subject Matter Experts. To a very large extent, Udemy has been successful in its mission. This e-Learning platform has many content creation tools such as PDF documents, PowerPoint, etc. text and video content can be collated to create and publish courses. This online training platform can be used by instructors for free. However, Udemy makes big money by taking 50% per sale of your course. Udemy has more than 12 million students.

### 2. Teachable No doubt, Udemy is a great online training platform. But there is little autonomy for instructors. For instance, Udemy doesn't let instructors control the branding and pricing of courses. Also, instructors know little about students. Teachable capitalised on all such limitations.

Today, Teachable has more than 3 million students, 7500 instructors, and 20000 courses. The numbers are getting bigger and better. Instructors should pay a monthly fee to access this platform.

**3. WizIQ** WizIQ is yet another established name in the e-Learning industry. For all intents and purposes, this online teaching software has been the go-to tool for instructors to deliver live and on-demand webinars. It is equipped with enough provisions such as slides, desktop sharing tools, audio, video etc. WizIQ is very common among academic course content creators.It’s effortlessly easy to create courses and publish them on WizIQ online marketplace. By the way, WizIQ is known to provide a host of plug-ins for popular learning management software such as Moodle, Sakai etc.

### 4. Ruzuku Ruzuku is another valuable addition to this list of 10 best e-Learning platforms. Instructors aren’t required to have much knowledge of technology to use this platform. As a matter of fact, Ruzuku invests great efforts to make it easy for Subject Matter Experts to create and publish courses. It has a ton of cool features such as PayPal payment gateway, MailChimp integrations, everyday backups, etc.

### 5. Educadium Educadium is on an ambitious mission to assist entrepreneurs and organisations of all sizes in creating, managing and profiting from online teaching and training through its EasyCampus platform. It has a plethora of features ranging from course designing to course publishing. You should check its trial version to get an idea of this [online training platform](https://elearningindustry.com/14-questions-online-training-platform). Subsequently, choose your subscription package.

### 6. LearnWorlds This is a platform that complements course content with immense social learning and high interaction. The platform's premium positioning has worked wonders all these years. There are many impressive features, such as tools to build sales pages, simulators, intelligent sales engine, advanced analytics, etc. They certainly deserve premium positioning. Learn world is an expensive platform. The platform charges $5 per sale and monthly subscriptions start from $24 per month.

### 7. Thinkific Thinkific is an amazing platform for 35000 + content creators who are looking to brand and sell courses. If you are looking to grow your audience quickly, you should bet your chances on Thinkific. Thinkific is a haven for smart personalities having trouble in designing and scaling their courses on other platforms. By all means, [Thinkific](https://elearningindustry.com/directory/elearning-companies/thinkific-labs-inc) is a top class exception. Prospects have little trouble in the building, launching, scaling, and marketing their courses.

### 8. Academy Of Mine As the name suggests, Academy of Mine lets you start your own online academy. If one is looking for a drag-and-drop solution that can save you a lot of time, Academy of Mine scores brownie points. This online teaching software is power-packed with an amazing administrative interface. The learning curve is somewhat steep. That said, if you climb up the curve, you can leverage all its powerful features.

### 9. Course Craft This turns blog into a profitable business. Its editor is flexible, simple and powerful enough to create different types of courses. It is integrated with Stripe and PayPal payment processors. Creating quizzes, lessons and forums is just a matter of few precious minutes. Instructors can run discounts and offers. Students can collaborate with friends and instructors and create a big knowledge ecosystem. It has great custom branding features.

### 10. Skillshare Top teachers on Skillshare make as high as $40000 annually. Almost every course lesson entails two key components—video and class project. Courses are made up of a series of small videos whose duration is typically anywhere between 10 and 25 minutes. You can make money through Skillshare's Partner Program. Of course, you have to fulfil certain prerequisites like enrolling at-least 25 learners per class etc. Skillshare’s subscription model is different from that of Udemy. Udemy sells subscriptions of individual courses while Skillshare sells subscriptions to all its complete content.

**E-LEARNING IN NIGERIA POLYTECHNICS AND ITS CHALLENGES**

Nigeria’s Ministry of Education legally outlawed exclusive use of e-learning for teaching in tertiary institutions in country. The regulatory bodies – the National Universities Commission, (NUC), National Board for Technical Education, (NBTE) and the National Council for Colleges of Education, (NCCE) have nothing in their curricula that recognises e-learning. Teaching is a hybrid of traditional face-to-face in some institutions in the country, especially private universities. The outbreak of the coronavirus pandemic exposed Nigeria’s decadent retrogressive position towards e-learning that is not 21st century compliant. Idris (2020).

Some polytechnics resorted to using Zoom, Telegram and Whatsapp platforms to offer e-learning to their students. These have limitations in terms of the number of students they can accommodate within the platforms. Zoom cannot exceed 100 students. Telegram accommodates 20,000 while Whatsapp has a capacity of 256 students. These are a serious handicap for e-learning in polytechnics. The [Open and Distance Learning (ODL) licence](https://www.nuc.edu.ng/project/open-and-distance-education/), the closest thing to an online university regulation, was designed solely for universities. Non-university applicants are required to meet basic land and other requirements of physical universities. Meanwhile, an ODL licence only provides eLearning for a limited number of courses. Acquiring the licence is a struggle that could take a few years. With its incentives low, only 12 universities in the country have an ODL licence, [NUC data shows](https://www.nuc.edu.ng/distance-learning-centers/). In the face of pandemic and disrupted learning, this is a problem for Nigeria’s 256 universities and polytechnics. The ODL licence has seriously limited the capabilities of universities while making it impossible for private non-university players to enter the market. Universities with an ODL licence have experience operating distance learning. However, their tech is limited and was never designed for scale or for exams. They had excluded themselves from understanding the real-world realities of online learning, especially for the Nigerian environment.

**LEARNING UNDER THE INFLUENCE OF COVID-19 IN NIGERIA** According to Idris (2020), after the shutdown of educational institutions, only a few of Nigeria’s 256 universities and polytechnics have adopted digital alternatives for learning. Lagos State University (LASU), made the most progress among government-owned universities. An ODL licence holder, in April 2020 in [the university pivoted](https://nationalaccordnewspaper.com/e-learning-credit-goes-to-lasu-asuu-says-vc/#:~:text=The%20Lagos%20State%20University(LASU,to%20explore%20other%20academic%20experiences.) its distance learning software, Envivo, into a full-blown e-learning platform. The existing ODL regulation does not allow such, but these are extraordinary times. LASU’s student email system has been rejigged and made functional. The school’s Vice-Chancellor, Prof. Olanrewaju Adigun Fagbohun, has used it to communicate with students and lecturers since the shutdown. Lecturers were also trained on how to use the Envivo platform, and given a free hand to combine it with other platforms like Zoom, WhatsApp and Telegram. With the new working from home realities, some lecturers have found it challenging keeping up with classes. There is always complaint about power outages running into weeks. Other challenges include missing of lectures by both students and lecturers alike, money for internet data, connectivity problems as a result of Local Area Network, (LAN); accessibility and affordability of smartphones, laptops, tablets and other necessary devices. Also the absence of pocket money from parents and distractions from learning from home as a result of domestic work and other unforeseen emergencies, unlike when one is at a polytechnic environment, etc. Alongside LASU, the University of Nigeria, Nsukka (UNN) and Ahmadu Bello University (ABU) are two other universities that operate eLearning for undergraduate students. However, in the case of UNN, the platform is limited to selected one-off courses rather than degree programs. But at the post-graduate level, [UNN’s eLearning platform](http://elearning.unn.edu.ng/), developed by EduPlatforms, offers full MBA degree programmes and allows students to learn remotely.

**PRIVATE UNIVERSITIES LEAD THE PIVOT TO ONLINE LEARNING** Private universities in Nigeria are making the most progress in competing with global standard practices about e-learning. They are tinkering with sophisticated e-Learning solutions even without an ODL licence. [American University of Nigeria (AUN)](https://www.aun.edu.ng/), located in the North East region of the country, is leading the pack. Before the government shutdown, evidence abounds that AUN had already set in motion a number of strategies to transition to an online learning situation Founded in 2004 by Atiku Abubakar, Nigeria’s former Vice President, AUN has made a seamless transition to digital learning by March 31.

The entire campus has been entirely wireless since the university opened its inaugural class. AUN's administrative activities have been digitised using an Open Enterprise Resource Planning. It uses Canvas, a digital learning platform, to provide tutoring, evaluation and educational resources including international books and journals for students. With its tech-savvy student community and mostly from upper-middle-class families, AUN had no worries its students would struggle with data or how to use the platform. Instead, it focused on helping lecturers adapt to the platform.

Before the shutdown, examinations were scheduled to hold in April. This didn’t change as AUN held exams on the Canvas platform. Parents and guardians are confident of the online and have little worry if the shutdown extends longer than expected. [Covenant University](https://covenantuniversity.edu.ng), another popular private university, has made a quick pivot to e-Learning following a lockdown of schools. Located in Nigeria’s South West, the university was about to kick off its second semester in late March when the shutdown was announced.

Administrators have resolved that the academic session will not be disrupted. Long before the pandemic, Covenant had developed an online module and repository of educational resources. Like AUN, the university is plugged into international academic journals and allowed lecturers to upload PowerPoint presentations to students. Regardless, Covenant’s online module was unprepared for the new demands caused by the pandemic. It did not support real-time learning, video conferencing or class attendance. Covenant University, like other institutions, did not see COVID-19 coming and so did not exactly prepared for a full-blown e-learning caused by the corona virus pandemic. Lecturers quickly switched to alternatives like Zoom to continue real-time learning with students. They have organised students into WhatsApp and Telegram groups and are using administrator privileges on these apps to hold classes and “mark” attendance. Once a class starts, lecturers ask students to indicate attendance; a few minutes later, chats are locked. It is reopened for students to ask questions or answer questions. Another institution, [Babcock University](https://www.babcock.edu.ng), adopted this method of tutoring. The academic session at the university was almost over when a shutdown happened. To conclude the semester, exams were held remotely, while lecturers used Zoom and WhatsApp to organise revisions ahead of the exams. It is widely believed that if the shutdown extends, this sort of online learning may be the new normal when Babcock resumes in September. Few other private universities like Joseph Ayo Babalola University, Crawford and Mountain Top University are equally using Zoom and WhatsApp for lectures, while exams are done online. Traditionally, private schools tend to have fewer students, less than 30 per class than public schools. In the virtual learning environment, it is easier to manage such classes.

However, at government-owned universities, things are a bit different. E-Learning is ongoing at only a few of these

**The Way Forward**

(i) The Federal Ministry of Education through its regulatory bodies – NUC, NBTE and NCCE should officially as a policy recognise e-learning as a 21st-century mode of administrating lectures and instructional materials to students. The above should be given a legal backing through constitutional provision.

(ii) As a follow-up the above, a hybrid of the traditional face-face classroom should coexist with virtual (campus) e-learning classroom in polytechnic in the country, the trend in contemporary tertiary institutions globally.

(iii) The government should provide specific funds in annual budgets for education aimed at building, maintenance and sustenance of e-learning in polytechnics in the country.

(iv) There's need to build basic infrastructure for the promotion of e-learning in polytechnics in the country comparable and compatible with standards in advanced countries.

(v) There is a need to employ qualified personnel to man these infrastructure and train lecturers, students and administrative officers on the application of the new technologies.

(vi) There is a need for free wireless internet services in polytechnics so that students can browse and connect to e-learning when the need arises. Interconnectivity between networks and among internet providers should be paramount.

(vii) Most students came from poor homes. There is a need to provide students with enough data for e-learning. This should be subsidised when they pay for their semester school fees. Lecturers should also be provided with data to upload lecture notes and other multi-media instructional materials to students.

(viii) Students should be provided with laptops, smartphones, tablets and other gadgets necessary for them to embark on e-learning.

(ix) Assurance of 24 hours of power supply for effective e-learning. Alternatively, through renewable energy sources, solar energy should be provided.

(x) Mass training for students and lecturers on how to maximise the effective and efficient use of e-learning should be undertaken.

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