



## **COVID-19 as a Catalyst Towards Redefining eLearning in Nigeria: Lesson from Selected Tertiary Institutions**

### **Le Covid-19 comme catalyseur de la redéfinition de l'apprentissage en ligne au Nigéria : leçon de certains établissements d'enseignement supérieur**

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#### **Abstract**

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*This study examined the possibility of using the COVID-19-induced e-learning in some tertiary institutions as a catalyst for strengthening such mode of instruction in the Nigerian institutions. The study adopted qualitative method of data gathering and analysis and used structured interviews to generate primary data. The primary data generated from the interview were triangulated with the secondary data obtained from similar studies in other higher institutions. Findings revealed that though lecturers and students did embrace the e-learning option when it was introduced, the COVID-19 pandemic actually exposed technological gaps to be filled in the Nigerian virtual educational system. The gaps range from irregular power supply, high internet subscription costs borne by lecturers and students, poor internet access, the cost of having access to the learning devices as well as users' unfamiliar with the usage of some software that enhance interactivity. Findings also revealed that lecturers and students were optimistic and enthusiastic about imbibing e-learning, and would want managements of institutions to fill the identified gaps and build on the progress made so as to ensure a robust combination of e-learning and the traditional teaching and learning approach in the foreseeable future. It is therefore recommended, amongst others, that e-learning in Nigeria could be*

*advanced beyond the stage it was before the lockdown to a more robust level if enough attention is given to elimination of the impediments.*

**Keywords:** Instructional media, Covid-19, Virtual learning, Learning devices, E-learning

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### **Résumé**

*Cette étude a examiné la possibilité d'utiliser l'apprentissage en ligne induit par le COVID-19 dans certains établissements d'enseignement supérieur comme catalyseur pour renforcer ce mode d'enseignement dans les établissements nigériens. L'étude a adopté une méthode qualitative de collecte et d'analyse des données et a utilisé des entretiens structurés pour générer des données primaires. Les données primaires générées à partir de l'entrevue ont été triangulées avec les données secondaires obtenues à partir d'études similaires dans d'autres établissements supérieurs. Les résultats ont révélé que bien que les enseignants et les étudiants aient adopté l'option d'apprentissage en ligne lors de son introduction, la pandémie du COVID-19 a en fait révélé des lacunes technologiques à combler dans le système éducatif virtuel nigérian. Les lacunes vont de l'alimentation électrique irrégulière, des coûts d'abonnement Internet élevés supportés par les enseignants et les étudiants, un accès Internet médiocre, le coût d'accès aux appareils d'apprentissage ainsi que le fait que les utilisateurs ne connaissent pas l'utilisation de certains logiciels qui améliorent l'interactivité. Les résultats ont également révélé que les enseignants et les étudiants étaient optimistes et enthousiastes à propos de l'intégration de l'apprentissage en ligne, et souhaiteraient que les administrations des établissements combler les lacunes identifiées et s'appuient sur les progrès réalisés afin d'assurer une combinaison solide d'apprentissage en ligne et approche d'apprentissage dans un avenir prévisible. Il est donc recommandé, entre autres, que l'apprentissage en ligne au Nigéria serait poussé au-delà du stade où il était avant le confinement à un niveau plus robuste si une attention suffisante est accordée à l'élimination des obstacles.*

**Mots-clés :** Supports pédagogiques, Covid-19, apprentissage virtuel, appareils d'apprentissage, e-learning

## **Introduction**

The outbreak of the COVID-19 pandemic and the challenges it posed created an unprecedented scenario in the global educational system. Schools across continents were forced to shut down, leading to hiccups in the formal learning process. The closure did not just affect academic, it also affected the socio-economic set up of nations around the world. For instance, developed economies such as Canada, United Kingdom and United States experienced a decline in their educational revenue as foreign students either quit their studies or were sent back home (Obiakor and Adeniran, 2020).

Nigeria has had its fair share of the pandemic outcome. Within the period, social distancing measures were introduced, and these ultimately led to the closure of schools for months to avoid overcrowding that could lead to the spread of the virus. As it has been the tradition, teaching and learning required interactions between students and the teachers. Therefore, students staying away from schools for a long period became a new challenge in the country's education sector (Aku, 2020). The nationwide school closures disrupted learning and access to vital school-provided services for a record number of students in Nigeria. In a UNESCO report cited by Obiakor and Adeniran (2020), almost 40 million learners were affected by the nationwide closure of schools in the country. In essence, the virus disrupted the landscape of learning in Nigeria by limiting how students could access learning across the country.

Although most countries around the world decided to temporarily close educational institutions, many were, however, of the position that learning should not stop, and created platforms for remote schooling (JRC Technical Report, 2020). On their part, universities and other higher institutions around the world, including Africa, resorted to looking for ways to cope and adapt to academic changes as a result of the pandemic (UNESCO, 2020). This measure was important because Conservative estimates for some selected European countries over the period consistently indicate that, on average, students would suffer a learning loss, if nothing was done to fill the gaps as quickly as possible. It also indicates that “although COVID-19 would not affect students equally, it would influence both cognitive and non-cognitive skills acquisition negatively, and may have important long-term

consequences, in addition to the short-term ones” (JRC Technical Report, 2020).

Based on the global direction, it would be out of place for Nigeria to see herself as being left behind. Besides the already fragile education system, the COVID-19 pandemic poses unprecedented challenges on the government, students, and parents that will highlight and could amplify some of the cracks in the system. As the nation begins to grapple with these challenges, a key question arises: Is the Nigerian education system designed to adapt rapidly to the changing world? Given the state of affairs in the world as occasioned by the pandemic, the nation's ability to ensure continuation of learning was bound to depend largely on her ability to swiftly harness available technology, provide adequate infrastructure, and mobilize stakeholders to prepare alternative learning programs (Obiakor and Adenira, 2020). Hence, the governments at all levels in the country needed policies geared towards fashioning out remote learning to fill the vacuum created by the pandemic.

It was therefore not surprising when, in April 2020, some states in Nigeria switched to the radio-television means of communicating with learners. It was a system whereby teachers go on air teaching their respective subjects and topics to learners who listen and watch at home. Some learning channels were also lunched on various satellite networks even though not every home in Nigeria could afford the purchase and monthly subscriptions of satellite networks (Aku, 2020). Although, the remote-learning decision was not what many institutions prepared for, it was already an inevitable measure, given the magnitude of the pandemic. Many primary, secondary and private tertiary institutions keyed into the programme; even in the midst of glaring lack of preparedness.

For the tertiary institutions in the country, there already was an existing cog which has always threatened to strengthen inequality in access to learning. This stemmed from two perspectives of learning reality facing those institutions. On one part, for most of the public tertiary institutions whose staff operate under the banner of the Academic Staff Union of Universities, Polytechnics and Colleges of Education, the e-learning alternative was already a non-starter in view of the lingering strike issues before the outbreak of the pandemic. In essence, even with the e-learning alternative occasioned by the pandemic, students in those

institutions were already out of the study equation. On the other hand, some private and public institutions not affiliated to the bodies took up the e-learning challenge. Some private universities even took the advantage to further develop their ICT section to create platforms in reaching out to their students, even while in their respective homes with their parents/guidance (Samuel, 2020).

In the area of public tertiary institutions, those owned by Kogi State were few among their peers in the country that were not affected by the industrial action which coincided with the pandemic. This was because of the State Government's proscription order which banned trade union activities in those institutions. The leadership of some of the state-owned tertiary institutions therefore opted for the e-learning alternative for their students during the lockdown. The State University located in Anyigba and the Polytechnic located in Lokoja, specifically outlined e-learning programmes and ordered the engagement of their students by virtual means; and this was substantially used for teaching and learning for both the first and second semesters for the 2019/2020 academic session.

In view of being just few of the public higher institutions to undertake virtual learning within the period, it is interesting to examine how the two institutions were able to navigate the process to impact positively on their students. In this regard, pertinent questions require answer that could serve as roadmap for ensuring an enduring e-learning in the country. These include: What dimension of e-learning (by way of platforms used) was adopted by the tertiary institutions within the period? How reliable and efficient were the facilities used in the course of the interactions between lecturers and students? Were the platforms adopted robust enough to be consolidated upon for continuation of the e-learning mode even after the students returned to campus? Given their experiences within the period, do both the lecturers and students see a sound prospect for e-learning in our tertiary institutions?

### **E-Learning: A Conceptual Overview**

The term e-learning connotes electronic method of learning which is associated with computerized learning in an interactive interface at the convenience of both the learners and lecturers. It basically depends on digital educational technology, and concerned with the holistic incorporation of modern telecommunication equipment and ICT

resources into the education system (Pingle, 2011). On his part, Parks (2013, p. 167) posits that the word “e” should refer to “everything, everyone, engaging and easy” in addition to electronic“. In most cases, e-learning refers to a course, programme or degree delivered completely online. According to Arkoful and Abaidoo (2014), the concept is classified as computer-based and internet based, depending on the user's mode. The term is synonymously used with virtual learning, online learning, convenient learning, and web learning.

The computer-based aspect involves the use of the ICT, while the internet-based aspect is purely online. In essence, the computer-based component includes the use of computer software and hardware, while the internet-based aspect comprises e-mail, blog, and other references (Kola and Opeyemi, 2020; Samuel, 2020). According to Kola and Opeyemi, (2020), Weblog, Social bookmarking, Wiki, RSS, Podcasting, Instant messaging, Text chat, and internet forums are essential tools for e-learning. The benefits or advantages of e-learning are enormous. Some of the advantages as cited by Kola and Opeyemi, (2020), include flexibility, efficiency in knowledge and qualification enhancement, motivation of students' interaction, cost-effective, and others. E-learning attempts to shift the focus of the educational environment away from the physical teacher-student interactions for learning engagement within the four-wall of the classrooms (Franklin and Nahari, 2018).

The e-learning in some parts of the globe is not a new phenomenon in promoting education. Studies have been documented on how it helps the students to receive instructions from teachers and learn adequately at all times including vacation period (Franklin and Nahari, 2018; Aina and Olanipekun, 2018; Samuel, 2020). Different types of e-learning could be explored as practiced in most developed nations. The typical e-learning prior Covid-19 in most Nigerian institutions is the distance learning programme modes. E-learning is considered critical to Nigerian education system as it can be used in various processes of education to support and enhance teaching and learning. In essence, the use of new multimedia technologies and the Internet in learning is seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration. E-learning has become a new paradigm and philosophy in education with a mission to serve as a development

platform for present-day society based on knowledge. It is evident that the concept of e-learning is considered to be very attractive as a new learning model whose effect will be a positive one to the development of education in developing countries especially Nigeria, with all its potentialities.

In the words of Olusankanmi (2020), however, a cursory look at the requirements for successful integration of digital technologies into the process of teaching and learning could present reasons why the practice may not be visible in some institutions in most African countries including Nigeria. In his view, there is a score of possible challenges which are associated with adoption of online mode of teaching and learning in general. These might include the problem of epileptic power supply in most places, including schools of higher education. Most times, students and teachers alike have complained that unstable situation of electricity power supply place a lot of impediments to the use of information technology, and so assume e-learning would not be feasible.

### **Theoretical and Empirical Concerns**

Prior to the outbreak of the Covid-19 pandemic, a number of theories have directly and indirectly explained the need for the adoption of e-platforms as means of achieving set targets in the educational sector to advance knowledge. One of such theories is the technological determinism theory. Technological determinism is a theory that emphasizes that technology has important effects on our lives (Oguche, 2019). It is anchored on what Whitworth, Gallupe, & McQueen (2000) referred to as the three-process model suggested as: Factual information exchange, the exchange of factual data or information, that is, message content; Personal information exchange, the exchange of personal sender state information, that is, sender context; and Group information exchange, the exchange of group normative information, that is, group position.

In their submission, these processes are not achievable without corresponding interactions with technological advancement. In line with the theoretical assertion, recent studies in Nigeria have lent credence to the significance of the evolving interactions between technology and the management of the educational sector. One of such studies was conducted by Oshionebo, and Fatoke, (2017), and it was

aimed at determining the extent to which the exposure of tertiary students in Lagos State to e-platforms would enhance their future leadership role performance in the society. The results show that there is a significant relationship between present exposure to e-platforms and future leadership performance of the students. The findings, however, indicated that the greatest challenge facing the utilization of e-platforms was electricity to power gadgets such as phones, laptop, tablets etc. Unstable power supply therefore turned out to be the biggest hindrance in the achievement of the desired goal. Based on the findings of the study, the researchers recommended that tertiary institution students should be encouraged to keep abreast with new innovations which would aid in the speedy growth of e-platforms in Nigeria.

In another study, Madu, Idoko, Dirisu, and Emerole, (2018), examined the institutional readiness and application of Web 2.0 tools for information service provision in University Libraries in Nigeria. Their findings revealed that some of the web 2.0 tools were frequently used while others are not used at all. It also shows that the level of institutional readiness was low, while majority of the respondents agreed that the web 2.0 tools are useful for information service provision. The study recommended that the universities should devote more financial resources to the university libraries in the area of ICT facilities acquisition to enhance learning.

Muhammad (2016) conducted a study on the “Effect of E-Governance on Students' Management in Ahmadu Bello University”. Findings generally revealed that the ICT infrastructure in the University was of low quality. Also, the level of student ICT utilization and the quality of ICICT staff were equally low. The study concluded that the low quality of ICT infrastructure, low level of student ICT utilisation and low quality of ICICT staff all have a negative effect on students' management in ABU. It was therefore, recommended, among others, that the quality of ICT infrastructure should be improved to meet the minimum standard; MIS Unit staff should provide proper orientation to students on portal usage; and that the staff strength of ICCT be increased and their training be made regular.

In another study, Ayoade (2018) examined the effect of e-governance usage on service delivery in tertiary institutions in Oyo Township of Southwest Nigeria. The results of the study showed that the use of e-



governance has significant positive effect on the effectiveness of services delivery, in tertiary institutions in Oyo Township. It also discovered that the use of e-governance has positive significant effect on the quality of services delivery and also has positive significant effect on cost reduction of services delivery in tertiary institutions in Oyo Township. The study recommended that government should, as a matter of importance, provide adequate infrastructures for the implementation of e-governance for all the tertiary institutions in the country. It also recommended that the e-governance platforms implemented by the government must be robust, accessible 24/7 and easily affordable to both the staff and students.

In a recent study, Olasunkanmi (2020) examined students' disposition to online learning in view of the challenge posed by the Covid-19. Findings however, indicated that students were not favourably disposed to online teaching and learning. Instead, they had a preference for face-to-face learning and wished the online aspect would not be retained, post COVID-19. Their reason was that the method was boring and could be vulnerable to distractions from family members and friends. From the researcher's perspective, the finding was surprising, since the assumption was that students would readily welcome online learning given that they enjoy watching films on television and are familiar with modern technologies including laptop computers and mobile hand-held devices like smart phones and iPads. In view of the study outcome, the researcher, amongst other recommendations, called for adequate orientation, motivation and training of students to acquire relevant skills to maximally benefit from online teaching and learning.

From the conceptual, theoretical and empirical issues so far analysed, it is clear that, even without Covid-19, e-instruction and education in Nigeria have become inseparable. With covid-19 and other unanticipated challenges in the future, the need to incorporate online mode of instruction into the educational system has become more imperative. That is why the experiences of higher institutions that had undergone what could be termed the “experiment” is fundamental to means of channeling purposeful e-learning atmosphere in the tertiary institutions.

### **Methodology**

The study is anchored on qualitative data gathering and analysis. The focus is to establish “multiple meanings of individual experiences”

(Cresswell, 2003, p. 18) and provide “rich, elaborate descriptions of specific processes or concerns” of the respondents (Haverkamp & Young, 2007, p. 274). In this context, the study provides concise but articulated views of the respondents drawn from Kogi State University and Kogi State Polytechnic in respect of their e-learning experiences during the lockdown. Such articulations provide specific narratives on salient issues captured in the study objectives with the view to making meaningful inferences. To gather the data, the study employed semi-structured interviews. This is because semi-structured interview “provides opportunities for both the interviewer and interviewee to discuss some topics in details” (Hancock, Ockleford & Windridge, 2007, p.6). In addition, the method afforded the interviewer the opportunity to bring the interviewees back on track when they seemed to be derailing from the scope of discussion. Some secondary data obtained from some private institutions operating within the lockdown period were triangulated with the interview responses to enhance the strength of the findings.

In terms of sampling of the respondents, multiple-stage sampling method was adopted. First, it should be borne in mind that, in qualitative studies, there are no scientific validated rules that guide the selection of sample size. In the words of Patton (1990, p.185) “the validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the analytical capabilities of the researcher than with sample size”. In view of this, maximum variation sampling method was adopted in the first stage of sampling, and this method enabled the researchers to “identify cases with different characteristics to maximise diversity in the sample” (Hancock, Ockleford & Windridge, 2007, p.7). In essence, samples were, first drawn bearing in mind, the lecturers and students who are considered the major strata of the target population. The two strata, therefore, provided the foundation for the samples later obtained.

In the second stage, chain sampling method was used to draw respondents from amongst staff and students in the two institutions. The chain sampling method (also referred to as snowball approach) constitute a chain reaction approach in which key informants who know about the subject matter are identified and located, leading to identification of more informants considered central to issues at stake. As names are mentioned repeatedly, those key names “recommended as

valuable by a number of different informants take on special importance” (Patton, 1990, p, 176). Following the snowball approach, twelve lecturers and twelve students were eventually selected from each of the two institutions. Hence, twenty-four respondents were, in total, selected from both institutions. The analyses were done based on the various themes identified from the interviews.

## **Findings and Discussion**

The structured interview questions were designed to elicit responses aimed at addressing some central concerns of the study thus: What dimension of e-learning (by way of platforms used) was adopted by the tertiary institutions within the period? How reliable and efficient were the facilities used in the course of the interactions between lecturers and students? Were the platforms adopted robust enough to be consolidated upon for continuation of the e-learning mode even after the students returned to campus? Given their experiences within the period, do both the lecturers and students see a sound prospect for e-learning in our tertiary institutions?

### **Dimension of E-learning or Platforms Adopted**

On the issue of dimension of e-learning or platforms adopted for the study, the respondents were allowed to identify a wide latitude of platforms that, based on their understanding, could possibly be used for such study and urged them to move ahead to mention and explain the ones adopted for the study in the institutions within the period. The lecturers on their part mentioned such platforms as Google classroom, Zoom, Telegram, Skype, Whatsapp, E-mail, Short Message Service (SMS) and Conference Call as possible platforms to use within the Nigerian e-space. On the specific question of the ones they adopted for studies within the period, majority of them mentioned Whatapp, Telegram, Zoom, Google Classroom and SMS, in that order, as the platforms mostly adopted to engage their students during the lockdown. This to some extents corroborates the findings of Olusankanmi (2020) that teachers in Anchors University engaged students with materials varying from text notes and voice notes, to animated videos. They also used different online tools and platforms like Google classroom, Google meet, WhatsApp, and YouTube.

Concerning what informed their choice of the platforms mentioned, the lecturers mentioned flexibility, portability, accessibility, and convenience for the instructors and the learners as the key reasons why

they opted for the platform. How then did they use the platforms; together or alternately? In their response, more than 90 percent of the lecturers stressed that while they did not use all the platforms to teach at a time, they did not use them in any particular order. The choice, they stressed was based on network availability, the data consumption strength of the platform and the productive values in specific situations. For instance, in situation where practical demonstrations and live face-face engagements are required, the lecturers found it convenient to use zooms to teach. But in situation where network disruption would not permit such usage, they had to fall back to the use of Google classroom, telegram or Whatsapp. Text messages, they explained, were mostly used to announce changes in lecture or to give assignment when internet services were disrupted and that e-mail were means of submitting some of the assignments. On the mode of interactions during lessons, the lecturers stressed that they prepared voice notes and dropped on such channels as Telegrams and Whatsapp and allowed to listen and ask questions, while the answers were simultaneously provided on the group platforms. When using zoom, however, the lessons were delivered and questions asked and answered as done under normal classroom interactions.

Students on their part mentioned Whatsapp, Telegram, Google Classroom, Zoom, Text Messages and e-mail as possible platforms to be used for e-learning. However, when it came to the crucial issue of the ones their lecturers used to engage them in learning, they mostly mentioned Whatsapp, Telegram, e-mail and text messages. When they were prompted to recall whether they used other platforms like zooms and Google classroom, the simple answer was that “they couldn't recall”. Some of them even responded that they downloaded they zoom app after they returned to the school for physical interaction. They, whoever explained that they received lectures via voice notes, reading of prepared note released by lecturers on platforms and submitted assignments either by means of e-mail or any of the interactive platforms as they case might be. From the responses of both the lecturers and students, a clear point established was that there was some form of e-learning engagements in both institutions during the lockdown. Even though there was some form of disagreement on the dimension of learning or the platforms adopted for the study, that both sides affirmed there was a semblance of virtual interface was an indication that learning could actually occur in Nigerian public institutions when schools are

forced to close.

### **Reliability and Efficiency of the Platforms used in the course of interactions**

The reliability and efficiency of the platforms adopted were not uniformly rated by the lecturers and students interviewed. The lecturers on their part stressed that the two issues were generally a function of power supply and internet services. Power they stressed, was important for them to charge their phone or laptop batteries. They however expressed dissatisfaction with the rate of power supply on campus; this they considered far below what they needed to keep their students constantly engaged. To solve the problem, they had to resort to using personally powered power source to be able to deliver lectures as they planned. They complained that doing so without the support of the institutions' managements was a huge burden on them, and this significantly affected their work plan.

On internet services, the lecturers were also far from being satisfied. To start with, the institutions were supposed to have 24 hours Wi-Fi services, which was generally not the case in both institutions as at the time the e-learning was introduced. The fall back option was therefore the use of services provided by major telecommunication networks like *MTN, Airtel, Glo and 9Mobile*. Again, the lecturers reflected that even these had to be sourced via the use of personal finances which was not an easy burden to carry. When asked if the platforms would be efficient and reliable if the issue of power supply and internet services were solved administratively, they responded that it would be substantially solved; even though technical hitches that could affect network services would not be ruled out.

Students on their part gave a more worrisome picture of the problem they faced when it came to both the reliability and efficiency of the platforms used. The most important concern they raised was that many of them did not have *Android* or *I-phone Operating System (IOS)* supported devices, and this made it difficult for them to join their colleagues in receiving online lectures. Even those who had access to such facilities found it difficult to constantly charge their phone batteries or load data to access the internet. In addition to this, there was also the issue of students who had to return to villages where there were no network services, since they could not afford to remain on campuses (or

the towns) during the lockdown. For such students, even if they had the devices, network accessibility naturally hindered them from participation in the lectures.

For those who could afford the devices or had access to the internet, the question then was whether the online lectures were adequate in comparison with the physical lectures they were used to. Their submission in this regard was that although online lecture was a welcome development, it was far from being satisfactory. Their complaint was that the system did not encourage interactivity they were used to under normal lecture conditions. This they stressed was majorly caused by network glitches which did not allow free flow of communication between them and their lecturers.

### **Simultaneous Use of E-Learning and Face-Face Teaching and Learning Modes**

Both lecturers and students were almost unanimous in their view of the possibility of combining online lectures with the physical learning situation. In their view, given the conditions of the environment in which they operate, it is still advisable to use online platform to complement normal lecture condition instead of opting for fulsome online platform. Students in particular expressed that they had no issue with receiving written lecture notes, voice notes or assignments through occasional use of platforms like Whatsapp, Telegram and e-mail since they could afford to charge their phones and make use of the school supported internet services. They added that the combination of both would not be hard for their colleagues who could not afford the enabling devices since they could easily share with friends or mates who have. In view of their experiences from using the platforms occasionally, they believed that the flexibility the platforms offer did not pose much challenge to them. They also explained they could be motivated to learn more if flexible aspects of e-learning are combined with the traditional face-to-face approach. This finding however contradicts that of Olusankanmi (2020) which showed that the students had negative dispositions towards online schooling.

### **Prospect of E-Learning in the Tertiary Institutions**

In spite of some draw back they experienced while adopting e-learning during the lockdown, the respondents were still of the view that there is a sound future for that mode of learning in the country. In their views, the

advantages of strengthening online learning far outweigh the disadvantages. For one, the continuous adoption of the platform by higher institutions will enhance the efficiency of knowledge as both students and lecturers will have easy access to a large amount of information within the cyberspace. In addition, in most public institutions, class space for lectures is usually a problem as sometimes there is clash in timetable or overpopulated students. The e-learning system, in their view would help reduce the issues of insufficient classrooms as lectures can be easily staggered between online and face-to-face contact, Furthermore the e-learning, in their view afford students and lecturers the opportunity to participate in learning from their comfort zone, supported with basic amenities they need when compared to the traditional teaching method where sometimes these basic amenities are unavailable for conducive learning. This is supported by the findings of Pingle (2011) that undergraduates in India have a higher acceptance level of comfort working with computers and other e-learning packages than the traditional face-to-face classroom. E-learning, they also stressed provides a platform for students to interact with themselves through the discussion forum which eliminates the barrier of participation. It also allows for effective communication and fosters relationship between students and lecturers. It also allows students to study at their open pace and convenience as the lecture material is readily available and the content delivery of the lecturer is quite accessible to them. Hence, it increases satisfaction and decreases stress.

The submissions of the respondents in this regard were however established on a big “IF”: that e-learning can and should be jointly adopted with the traditional face-to-face learning process only “if” the power and network sources in the study environment are stabilized and lecturers and students are supported financially to access online facilities in situations where they find it difficult to do so.

### **Conclusion and Recommendations**

This study examined the possibility of using the COVID-19-induced e-learning in some tertiary institutions as a catalyst for strengthening such mode of instruction in the Nigerian institutions. It used the experiences of two of such higher institutions in Kogi State to establish the bases for advancing a way forward in that regard. From the study, it is discovered that though lecturers and students did embrace the e-learning option

when it was introduced, the COVID-19 pandemic actually exposed technological gaps to be filled in the Nigerian educational system. The gaps range from irregular power supply, high internet subscription costs, poor internet access, and the cost of having access to the learning devices. The study established some applicable opportunities associated with embracing e-learning, which include lecturers'/learners convenience, exposure and relative cost benefits. It further showed that lecturers and students are optimistic and enthusiastic about imbibing e-learning, and would want managements of institutions to fill the identified gaps and build on the progress made so as to ensure a robust combination of e-learning and the traditional teaching and learning approach in the foreseeable future. It is therefore the conclusion of the study that e-learning could be advanced beyond the stage it was pre-lockdown to a more robust level if enough attention is given to the basic associated with power supply and the internet.

It is therefore the recommendation of the study that government and higher institutions managers be more decisive in their handling of public tertiary institutions and help prepare them for the adoption of ICT and the attendant e-learning. In addition, effective government policies that will sustain workable social infrastructures that will be sustainable even during unforeseen crisis is required to keep alive the full actualization of e-learning. Finally, the study is of the position that parents should try to provide an enabling environment for kiths and wards while at home. They should try as much as possible to provide support ranging from making available the necessary electronic gadgets (such as laptops and android phones), access to electricity power supply (generating sets and solar panels) and sufficient data for strong and consistent internet connection.



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