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## Post Pandemic Classroom and Students' Readiness for the Utilisation of Digital Technologies in Ekiti State University, Nigeria

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### **Abstract:**

*Traditionally, face-to-face approach to teaching and learning had been the system of education adopted in Nigeria but with the emergence of COVID-19 pandemic and the attendant mandatory closure of schools, there was need to shop for new options in order that learning should continue without risks to human and educational standards. The study examined Students' readiness for the utilization of digital technologies in post pandemic classroom experience in Ekiti State University in Nigeria. The descriptive research design of the survey type was adopted for the study. Questionnaire instrument and interviews were used to collect data. Results showed that digital technologies were available for the students' use and that the students were ready for the transition from face-to-face to virtual learning. The students' performance greatly improved as a result of the technology skills acquired with the use of the digital technologies utilized by the students. It was recommended that though COVID 19 negatively affected education generally in Nigeria, Ekiti State University was not so much affected as to neglect the students. Teaching and learning was going on.*

**Keywords:** Students' readiness, utilization, digital technologies, post pandemic classroom

### **1. Introduction**

The outbreak of corona virus (COVID 19) spread like wild fire from the city of Wuham, Hubei Province, in China in December, 2019 to other parts of the world at an alarming rate. The global outbreak set the whole world in fear and confusion. Some of the healthcare strategies put in place to curb the spread were, washing of hands, wearing of face mask, physical distancing, and eventual lockdown. According to Sintema, (2020) lockdown and staying at home strategies were put in place as urgent action to flatten the curve and the control of the transmission of the disease. The Director General of the World Health Organisation (WHO) declared the outbreak of the disease on the 30<sup>th</sup> of January, 2020 and a public health emergency of international concern.

The Federal ministry of health in Nigeria confirmed the first case of corona virus disease in Lagos, Nigeria while the World Health Organisation (W.H.O) declared it as pandemic on March 12, 2020. The Federal Ministry of Education proactively approved the closure of all schools for a period of one month from the 23<sup>rd</sup> of March, 2020 to curtail the spread of the disease. This affected all activities of Nigerian students (Education in Emergencies Working Group 2020). The virus posed a significant challenge to educational activities and in consequence, many universities around the world either postponed or cancelled all academic activities to minimize gatherings and this paved the way for the inevitable introduction of digital learning (Dhawan, 2020). The Federal Ministry of Education in Nigeria also, responsively announced the temporary close down of all schools in Nigeria but mindful of the need to encourage students actively engage in learning despite the pandemic with instructional technology as learning is active and not passive (UNESCO 2002). According to E-learning Africa, the involvement of private sector was commendable with some governments working with telecoms companies to provide free data access to educational sites.

The questions that arose were, 'do schools in Nigeria have the technology to cater for the teeming population of Nigerian students? Do students have the financial means and capability to engage in online lectures? Are the teachers equipped with the technological 'know how' to handle the digital and the instructional resources to deliver virtual lectures? How would students from the rural communities benefit from the online lectures? Would all parents have the financial capability to assist their children for E- learning? Does the Federal government have the instructional and financial resources to bridge the digital divide? All these were questions that arose as a result of the pandemic which needed short term and long term solutions.

The government of China provided computers, mobile data packages and telecommunications subsidies for students from low income households and in Nigeria, Ogun and Lagos States were adopted local media channels for educational purposes. For instance, radio programmes were used to reach out to students in remote communities with solar powered educational devices, preloaded with offline academic resources. (www.knowcovid19.ng;UNESCO). The suspension of face to face academic activities in many schools and institutions encouraged a switch-over to online teaching for students in the comfort of their homes. This provided an alternative learning options to minimize physical interactions between students and their teachers to forestall the spread of the deadly disease.

### 1.1. Nigeria's Preparedness for E-learning

Following the COVID -19 pandemic that forced all schools in Nigeria to close down face to face academic activities from march 27, 2020, as one of the measures taken by the federal government to curtail the spread of the disease, Eze, Sefotho, Onyishi & Eseadi (2021) submitted that this translated to a contextualized state-wide school closure across the country. Each state ministry of education therefore released modalities for radio and television schooling and online learning for students in private schools. In reality, COVID 19 Pandemic exposed extreme inequality in the education system in Nigeria. Some State Governments closed down educational institutions early without adequate preparation and provision for a replacement for face to face classroom teaching. This caused problems for teachers and students who were not competent enough to use digital devices that could fill the vacuum created most especially between the urban dwellers and those in remote areas. Some teachers and students who struggled to navigate the online learning system from the comfort of their homes during this period did so majorly by trial and error. Zhong (2020) opined that poor resource institutions and students from poor background, may have limited access to technology and internet which may invariably affect their online learning environment. Thus, inaccessibility to digital tools debarred students who had digital hindsight from following the trend on the curriculum relevant to their studies online. This statement was corroborated by Crawford, Butcher-Henderson, Ruldolph, Glowatz (2020) that university students face some devastating challenges that may not augur well for their study at home. Some educational programmes on radio and television were only accessible to those in urban and suburban setting because of power supply and internet connectivity that give credence to online learning. Eze, Sefotho, Onyishi & Eseadi (2021), observed that university students who may have the skills to undertake online learning faced poor infrastructure.

Nigeria's preparedness or otherwise for online learning during the COVID 19 Pandemic exposed the shortcomings of the education sector in Nigeria as:

- Inadequate preparation for eventualities both now and in the future
- Lack of plans for a technology supported education system
- Proactive attitudinal disposition of curriculum planners to the socio-economic backgrounds of the citizenry
- Lack of training and re-training for teachers to meet with global standards
- Inequitable implementation of the educational policy across the geo-political zones of Nigeria
- Urgent need for the review of the state of educational development in Nigeria to cope with the exigencies of the present and the future.

### 1.2. Ekiti State University, E-learning and Students' Digital Experience

The introduction of technology into teaching and learning process in Ekiti State University has paved way for the application of several instructional materials and tools on line. Ekiti State University has been working hard to upgrade her facilities to compete favourably and globally. This resulted in the erection of new buildings and improved information and communication technology laboratories. The revitalisation of the university portal and the internet facilities were steps in the right direction. Lecturers were also exposed to various workshops and seminars to update their knowledge on the use of technology and courseware design that can adequately cope with the matters arising from the COVID 19 pandemic resulting total lockdown. Various faculties and departments were exposed to trainings by the Information and Communication Technology (ICT) unit in the use of Google Meet for on-line instructional delivery. Lecturers taught online and uploaded instructional materials accordingly for students to download for study. Most students did not find it difficult because they were already technology compliant as a result of the presence of 'Smart School' an internet service provider that had been operating on the campus before the pandemic.

We are in a digital world where technology is used in a large format to produce, preserve, distribute information and communicate online through keyboard. There are virtual classrooms that save the students the trouble of travelling to schools, sitting in front of teachers and attending lectures in the same monotonous manner. They can learn at the comfort of their homes distant education institutions are being established to cope with the problem of teaching and learning in the time of lockdown. Digital facilities on their own are insufficient in our contemporary world as Dhawan, (2020), believes that educational units are finding ways to deal with the challenging situation through accessibility, affordability, flexibility and learning pedagogy.

A number of universities both public and private have opened their doors to students to continue their education but they make use of the internet hence avoiding traditional face to face interaction. The requirement for virtual learning is making human and materials available and accessible for global enrichment of mankind. In a virtual setting, teaching and learning is individualised thus taking education beyond the classroom. It is flexible and can help nurture and mature the talent of an individual in an interesting and interactive manner. It gives both the students and their lecturers a great opportunity to be creative and competent.

The teacher and the students therefore, must possess some skills and abilities to be able to interact meaningfully and productively online. Some of the skills and abilities include:

- Basic knowledge of the computer and its application
- Ability to navigate through the web using different search engines like Google
- Familiarity with multimedia software
- Familiarity with internet software
- Ability to download and upload files
- Storage and retrieval of information from the internet and multimedia devices
- Audio and audio visual communication with students and lecturers among others.

April 2021 marked a new phase in Ekiti State University vis-a-vis its academic activities that were stalled but got restored through the online lectures. This led to lecturers being trained by information and communication technology (ICT) experts in the use of internet for teaching and learning process. Lectures were done online through Google meet. Course items were uploaded for students while lecturers uploaded assignment and notes for students, Students on the other hand downloaded instructional materials for self –learning from designated websites. Online teaching was only available and accessible to those with internet facilities.

The current situation also offers a significant opportunity to recognize the vital role that technology is sure to play in the future of education in Nigeria and Ekiti State University in particular in the post COVID 19 pandemic classroom. The pandemic provided a wake-up call to grapple with the future particularly in the post COVID 19 pandemic classroom. Students and teachers have started interacting on courses selected on the internet. Ekiti State University adopted Google meet as platform for students and lecturers to interact through whatever method they choose in the teaching and learning process. Such methods include lecture, demonstration, discussion and seminar. The current method of learning is significant because it offers opportunity to recognize the vital role technology plays in the future of education in the post pandemic Nigeria and Ekiti State University (EKSU) in particular.

The achievement recorded in Nigeria so far are commendable but the challenges of meeting global standards that competitive are numerous. These include:

- Increased digital migration even when many did not have access to technology infrastructure like power, internet facilities and connectivity, television and computer especially for those in rural areas. .
- High cost of instructional materials for E-learning
- Non availability of instructional materials for E-learning.
- Funding to support E- learning tools
- Many teachers are scared and are un-prepared to adapt to the new system.
- The curriculum also is not yet adapted to the innovations brought about by the COVID 19 Pandemic

### 1.3. COVID 19 Has Benefits

- It provided new opportunities for education system in Nigeria
- It made policy makers on ICT to turn the words into action by implementing the suspended policy implementation on ICT.
- It helped to evolve a new road map for sustainable education systems in the 21<sup>st</sup> century Nigeria
- State governments have started collaborating with Telecommunications companies to provide free data access to educational sites
- It has helped to expose teachers to integration of technology into teaching and learning
- Television and radio broadcast that educational are getting more popular
- WhatsApp, Googlemeet, Google classroom, Zoom, Facebook to mention a few are getting more popular as platforms for teaching and learning.
- However, the integration of technology into teaching and learning process in the post COVID 19 Pandemic classroom would provide new opportunities for education system. It would also afford opportunity for government policy on ICT to be actualized and evolve education system to fit the 21<sup>st</sup> century

A study of this kind is timely and valuable in this digital and paperless era. It will assist the government of the day, policy makers and all stakeholders to have a rethink about the state of the nation especially in the area of technology facilities. It is expected that the outcomes of this study will guide both teachers and students in this COVID-19 pandemic period when online learning becomes a culture.

### 1.4. Statement of the Problem

The use of digital technologies in education holds great potentials and special packages for students. The benefits of studying and learning with digital technologies in various courses are yet to be realised in Ekiti State University. Ekiti State University Students' inability to utilize digital instructional resources or tools in studying and learning different courses seems not to meet the expectation of the University. Students in order to employ digital technologies in studying and learning need to show readiness, interest and potentials for the acquisition of required skills necessary for utilizing them. Students' post COVID 19 Pandemic classroom and the seeming low speed of the internet super highway is a crucial problem this study intends to solve.

### 1.5. Purpose of the Study

The purpose of the study was to determine students' readiness for the utilization of digital technologies in studying and self-learning in Ekiti State University. Specifically, the objectives of this study were to ascertain:

- Students' readiness for the utilization of digital technologies teaching and learning.
- Students' competence in the utilization of digital technologies in teaching and learning.

### 1.6. Research Questions

The following research questions were raised:

- What are the digital equipment available for students' use in Ekiti State University in post COVID-19 pandemic period?
- How ready are Ekiti State University students for the utilization of digital technologies in studying and learning?
- Are Ekiti State University students favourably disposed to the utilization of digital technologies for teaching and learning?

## 2. Methodology

### 2.1. Study design

The descriptive survey of design was adopted for the study. A structured questionnaire was designed to elicit responses from the participants. The target population for the study was all Ekiti State University students from all the Faculties and departments.

The sample size for this study constituted of 100 students from all the departments in the Faculty of Education in Ekiti State University using purposive and stratified random sampling techniques.

Instrument for data collection

The instrument for data collection was a 32-item questionnaire tagged: 'Students' Readiness towards Utilization of digital technologies Questionnaire (SRUDTQ)' based on the purpose of study and research questions. This instrument was organized into three clusters and measured on yes/No and a 4 point scale of Strongly Agree (SA) – 4 points, Agree (A) – 3 points, Disagree (D) – 2 points, Strongly Disagree (SD) – 1 point. Each of the clusters represented one of the research questions. The research instrument was validated by experts in Educational technology and Information and Communication Technology. Experts in Tests and Measurement and Educational Technology validated the research instrument to determine its face and content validity. Corrections were made on some of the items and these corrections were incorporated in the research instrument before its final administration to the respondents. The data collected were analysed using descriptive statistics of frequency counts and simple percentage.

### 2.2. Findings of the Study

- Research question 1: Availability of digital instruments for students use in Ekiti State University in post COVID-19 pandemic period.

S/N	E-learning Facilities	Available F	%	Not Available F	%
1	Computer Laboratories	98	98.0	2	2.0
2	Internet Facilities	67	67.0	33	33.0
3	Stable Internet Connection	87	87.0	13	13.0
4	Computer Equipped with necessary educational Software	45	45.0	55	55.0
5	E-Library	66	66.0	34	34.0
Total		363	72.6	137	27.4

Table 1: Showing the Digital Instruments Available for Students' Use in Ekiti State University in Post COVID-19 Pandemic Period

Table 1 shows the frequency counts and percentages of the digital equipment available for students' use in learning in Ekiti State University in post COVID-19 pandemic period. The study revealed that 98% of the respondents Agreed that Computer laboratories are Available for use while 2% of the respondents Disagreed, 67% of the respondents agreed that Internet Facilities are available for use while 33% of the respondents disagreed, 87% of the respondents agreed that Stable Internet Connection is Available for use while 13% of the respondents Disagreed, 45% of the respondents Agreed that Computer Equipped with necessary Software are available for use while 55% of the respondents Disagreed, 66% of the respondents Agreed that e-Library is available for use while 34% of the respondents Disagreed.

The study therefore revealed that digital equipment are available for students' use in learning in Ekiti State University in post COVID-19 pandemic period such as Computers, Computer Laboratories, Internet facilities, Stable internet Connection and e-Library Available for students use while Computer Software were inadequate.

- Research question 2: Level of students' readiness towards E-learning in Post Covid-19 period in Ekiti State University?

S/N	Items	Agreed		Disagreed		Min	max	II
		F	%	F	%			
1	Students in my department were anxious to take lectures	87	87.0	23	23.0	10.00	16.00	13.89
2	Students resumed earlier Post Covid-19 immediately resumption was announced	91	91.0	9	9.0			
3	The Post Covid-19 Online class saw large turnout	49	49.0	51	51.0			
4	E-learning improves student's academic performance	92	92.0	8	8.0			
5	The news of resumption and online class went viral as student were anxious to participate	95	95.0	5	5.0			

*Table 2: Showing the Level of Students' Readiness towards E-Learning in Post Covid-19 Period in Ekiti State University*

Table 2 shows the frequency counts and percentage of the respondents' on the level of students' readiness towards E-learning in Post Covid-19 period in Ekiti State University, 87% of the respondents agreed that Students in their department were anxious to take lectures while 23% disagreed. 91% agreed that Students resumed earlier Post Covid-19 immediately resumption was announced while only 9% disagreed. 49% agreed that the Post Covid-19 Online class saw large turnout while only 51% disagreed. 92% of the respondents agreed that E-learning improves student's academic performance while 8% disagreed. 95% of the respondents agreed that the news of resumption and online class went viral as students were anxious to participate while 8% disagreed. The means score of 13.89 is greater than the minimum score of 10 revealed that there is high level of students' readiness towards E-learning in Post Covid-19 period in Ekiti State University.

- Research question 3: Influence of digital equipment on Ekiti State University students academic performance in post Covid-19 pandemic period.

S/N	Items	Agreed		Disagreed		Min	Max	II
		F	%	F	%			
1	The Online class enhanced my participation and performance in class activities	78	78.0	22	22.0	10.00	16.00	13.89
2	I performed better after checking my first semester results	86	86.0	14	14.0			
3	My classmates generally perform better compared to pre-Covid-19 semesters	51	51.0	49	49.0			
4	I am of the opinion that the systems used during the Post Covid-19 be maintained	43	43.0	57	57.0			
5	My CGPA increased after the first semester result of post Covid-19 was released	53	53.0	47	47.0			

*Table 3: Showing the Performance of Ekiti State University Students' Academic Performance in Post Covid-19 Pandemic Period*

Table 3 shows the frequency counts and percentage of the respondents on the academic performance of students in post Covid-19 pandemic period in Ekiti State University, 78% of the respondents agreed that the Online class enhanced my participation and performance in class activities while 22% disagreed. 86% revealed that they performed better after checking their first semester results while only 14% disagreed. 51% agreed that their classmates generally perform better compared to pre-Covid-19 semesters while only 49% disagreed. 43% of the respondents opined that the systems used during the Post Covid-19 be maintained while 57% disagreed. 53% of the respondents revealed that their CGPA increased after the first semester result of post Covid-19 was released while 47% disagreed. The means score of 13.89 which is greater than the minimum score of 10 revealing that the academic performance of students in post Covid-19 pandemic period in Ekiti State University slightly improved hence the post Covid-19 teaching method should be maintained.

### 3. Discussion

The study examined the digital equipment available for students' use in Ekiti State University during the Post COVID 19 pandemic period. The results revealed that digital equipment such as Computers, Computer Laboratories Internet facilities, Stable internet Connection and E-Library were available while educational software were inadequate.

The finding of this study disagreed with Eze, Sefotho, Onyishi & Eseadi (2021) findings, that 'University students who may have the skills to undertake online learning face poor infrastructure'. The study further revealed that there was high level of students' readiness towards E-learning in Post Covid-19 period in Ekiti State University. The study also showed that the academic performance of students in post Covid-19 pandemic period in Ekiti State University slightly improved above the previous performance hence the advocacy to maintain post Covid-19 Pandemic teaching with technology tools. The finding further revealed that most of Ekiti State University students demonstrated digital skills in the use of digital resources in learning hence the improvement in their academic performance. This finding also disagreed with Crawford, Butcher-Henderson, Glowatz (2020) that university students face some devastating challenges that may not augur well for their study at home. However, students from poor background had some challenges which confirmed the findings of Zhong (2020) who 'opined that poor resource institutions and students from poor background, may have limited access to technology and internet facilities which may invariably affect their online learning environment'.

#### 4. Conclusion

The study aimed at examining students' digital readiness in COVID 19 pandemic era in Ekiti State University. The study revealed that digital equipment were available for students use, the students were skillful in the use of the equipment and observation also showed that the students had some level of readiness hence their academic performance improved greatly.

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