ICT, EDUCATION AND POST PANDEMIC REALITIES: AN ASSESSMENT OF COLLEGES OF EDUCATION IN NORTH CENTRAL NIGERIA

BY

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Abstract
Quality education, which remains the key to sustainable development globally, is under threat sequel to Covid-19 pandemic that has bedeviled the academic activities owing to its social distancing rule. This study examined ICT, Education and Post Pandemic Realities: An Assessment of Colleges of Education in North Central Nigeria. This study adopted descriptive survey design. A total of 571 lecturers and 975 students randomly sampled from Colleges of Education in north central, Nigeria. The instruments used for data collection was a checklist for both the lecturers and students titled 'availability, status, adequacy, awareness, accessibility, and utilization of ICT facilities Questionnaire (ASAAAUICTF) and developed by the researchers. The questionnaire was validated by two experts in the Department of Computer Science and one specialist in educational technology from University of Ilorin. The reliability coefficient of the instrument was established using Cronbach alpha and it yielded an index of 0.88. Copies of the questionnaire were administered with the help of research assistance to seven colleges of Education in north central, Nigeria. The data collected were collated and analysed using means and percentage in answering the six research questions. A benchmark of 2.0 and 2.5 was adopted for a 3 and 4 likert scale responses and 50% for percentage. Findings reveals that in colleges of education in Post pandemic era, desktop computer, laptop computers, computer printers, photocopier, tape recorder, radio set, television, handheld tablet and mobile smart Phone were available to both lecturer and students; desktop computer, laptop computers, computer printers, tape recorder, radio set, television, handheld tablet were in functional state; ICT facilities were grossly adequate to both lecturer and students; lecturers and students were partially aware of all the ICT facilities; lecturers and students had no access to ICT facilities; and lecturers and students rarely utilize facilities. The study therefore among others recommended that Lecturers should utilize available ICT facilities whenever they are teaching to keep students abreast of how these facilities are used.
Keywords: ICT, Education, Post Pandemic realities, availability, status, adequacy, awareness, access, utilization

Introduction
The United Nations relayed that even though physical distancing, including quarantines, isolation and even lockdown as well as contact tracing seems to be most effective in limiting the further spread of community transmission of COVID-19, many countries do not have the resources to prepare themselves for the crisis. Nigeria is one of the countries in sub-Sahara Africa where more than half of the schools have no access to the internet and computers facilities. Introduction of ICT has become an important source of innovation and improvement of efficiency for many sectors across the globe. In the education sector, particularly, the application of ICT has become a critical part of the learning process for university students both outside and inside the classroom setting. The government and other stakeholders in the education sector such as university management and researchers have invested millions of naira to adopt ICT in the education system during the last two decades. Some universities that have adopted ICT have recorded immense advancement in the application of ICT for the improvement of learning methods, teaching, research, and development. It is, however, not clear what impact the ICT applications have on the performance and achievement of students.

For lecturers and their students, the availability of modern computers, peripherals, networking and resources within an increasingly diverse range of technologies is an essential part of learning and teaching in the 21st century. ICT constitutes an input in the student learning process that should help produce better learning output. The availability of ICT resources can enhance learning by making education less dependent on differing teacher quality and by making education available at home throughout the day (Mbwesa, 2002). Bonnet (2007) argues that the use of ICT can positively transmit knowledge to students. Furthermore, the availability and use of ICT can help students exploit enormous possibilities for acquiring information for schooling purposes and can increase learning through communication (Riel, 2008).

Davis (2000) asserts that increased availability of ICT is especially useful for students who suffer from learning disabilities since ICT use allows teachers to prepare suitable tasks for individual needs and each individual more effectively. However, authors like Cox, Preston and Cox, (1999) believe that allowing certain students to use computers distracts them from focusing on the task at hand. Central to the argument of availability are the issues of whether or not the teachers and students have ample and convenient access to computers and their accessories let alone the software that is necessitated in the context of their day-to-day research, collaboration, and teaching and student evaluation. Furthermore, students and teachers should have confidence in these facilities, which is in turn reliant on the facilities reliability or degree to which the teachers and students are sure that they will have access to them at all expected times and utilize them predictably to the betterment of their academic work, an issue on which consensus is enormous as is clear from ICT in education.

In recent time, the National Communication Commission donated laptop computers and tablets for the use of colleges of education by students and teachers. These are off-line, non-interactive computer tablets on which course materials have been loaded. These are available to only few lecturers with none for the students. Interactions with the lecturers reveal that the devices contain only few materials in some courses rather than comprehensive teaching and learning materials. Apparently, teachers rarely make use of them. Questions have also been raised on their availability and usability especially in teaching and learning (Fayemi, 2018). Thus, inadequate in number for the lecturers and none for the students.

Studies on lecturers' and students' awareness of ICT facilities for teaching and learning in tertiary institutions findings were inconsistent. While some Nannim, Yushau & Gital, (2018); Thakur, (2020) found low awareness of modern ICT facilities by lecturers despite the availability of the facilities and no significant difference between male and female lecturers' level of awareness of ICT facilities for teaching. Again, Agim, Iroeze, Osuji and Obasi-Haco (2018), Onu and Ezhim (2019) found that ICT facilities were not utilized by teachers due to poor awareness. Conversely, while Jumare, Tahir and Hamid (2017) found that lecturers were highly aware of ICT facilities, Beena and Mathur (2012) reported moderate awareness of ICT facilities by teachers and a significant difference between male and female teachers' awareness of ICT facilities available for teaching in favour of male teachers. The inconsistent nature of these findings suggests that research on lecturers' awareness of ICT facilities for teaching in tertiary institutions of learning is inconclusive. Thus justifying the inclusion of lecturers and students awareness if ICT facilities in the post pandemic era.

Accessibility and use of ICT allows students to investigate more thoroughly the real world (Riel, 2008). They can more readily access information sources outside the lecture rooms and can use tools to analyze and interpret such information. Information may be accessed through online systems or through data logging systems (Riel, 2008). These technologies allow them to receive feedback, refine their understanding, build new knowledge and transfer from school to non-school settings. In the past this had been difficult to be provided in schools due to logistical constraints and the amount of material to be covered all of which can now be addressed with ICT. What can be learned is broadened and deepened. Barriers associated with ICT integration that fall within the physical realm are beyond the direct control of the teacher (Loveless, 2006). These barriers centers around accessibility and infrastructure and included decisions about purchasing, locations of wiring drops, and decisions regarding the placement of

computers in centralized labs verses placement of computer pods in classrooms. Placing computers in centralized labs may provide students with equitable and efficient exposure to technology but severely limit the technology's accessibility for classroom instruction (Bingimlas, 2009). Labs deny teachers the flexibility of deciding when technology should be incorporated into instruction and may send the message to students that computers are not central to learning or the activities in their classrooms. In addition, physical limitations of the classroom including size and location of desks, often limit choices of room arrangement and do not provide the space that is necessary to add pods of computers to be used as technology centres.

The rapid developments of ICT require a communication network which actually can be established by the proposed approach. Teachers learn most from their own networks (Janssen, 2009). There is a great need especially for learning about ICT and its rapid developments. Teacher training institutes can fulfill an active role in (learning) networks, on the one hand by arranging and facilitating these networks and on the other hand by providing the knowledge from which people can learn. Additionally, the institute can develop its post-initial education in this way. Schools and teacher training institutes experience a comparable process. Schools and teacher training institutes can learn from each other's experiences and expertise as well. They experience the same processes in designing new education. They have similar questions and face the same challenges.

Learning via ICT is an instructional practice that ultimately helps students learn through various digital means such as the internet, corporate network, computers, satellite broadcasting, audiotapes, videotapes, interactive TV, compact disks, among others (Ming-Hung, Huang-Cheng, & Kuang-Sheng, 2017). These mediums are applied in a broad range of technology-enhanced educational strategies including blended learning, network-based learning, computer-based learning, virtual classrooms, digital cooperation and other strategies that rely on digital tools (Lauren, 2020). Most educational institutions in Nigeria are currently based only on traditional methods of learning including schools, colleges of education and universities (Dhawan, 2020). This means that they follow the traditional set up of face-to-face lectures in a classroom.

However, the use of ICT in learning in college of education in Nigeria is still at a low ebb due to the resistance to change from traditional pedagogical methods to more innovative, technology-based teaching and learning methods. Although Tetfund has committed money into the purchase and installation of ICT facilities in colleges of education, and have started synthesizing learning but a lot of teachers are still stuck with old procedures (Dhawan, 2020). This is not far connected from the facts that there is inadequate ICT infrastructure, underfunding of colleges of education, poor and limited expertise, lacks effective co-ordination of the various ICT for initiative and as well the overdependence government for funding (Aduke, 2008). For instance, Digital readiness indicates a nation's ability to implement digital learning and harness advantage of ICT. However, Nigeria ranks 79th out of 80 countries in the Economist Intelligence Unit's Technological Readiness Ranking for 2018 (Zubairu, Oyefolahan, Babakano, Etuk & Mohammed, 2020). From this survey, Nigeria's infrastructure is far from being adequate for ICT integrated learning. Hence, one can say that Nigeria is an ICT emerging country.

Deducing from the above, the COVID-19 pandemic in line with its social distancing status opened up wider the need for ICT integrate learning which has before now been in neglect and abandoned owing to the deplorable state of our infrastructure and educational sectors. The COVID-19 further exposed the worsening educational sector of Nigeria and provided the need to improve on the system which serves as the only panacea to the public amidst coronavirus pandemic. Therefore, there is need for educational institutions to remain resilient and find new ways to continue with teaching- learning activities (Chang-Richards, Vargo & Seville, 2013). Hence, fully embracing of ICT in learning is not only necessary but also a last resort. Therefore, the need to assess colleges of education in relation ICT and post pandemic realities in Nigeria.

Statement of the Problem

Education has remained the bedrock of any nation being an instrument for national transformation and development. In this regard, Etejere and Ogundele (2008) noted that a country that toys with the education of her citizens is going to experience dwindled development and will invariably be ranked low among the developed nations of the world. Integration of ICT in learning in the educational sector have received extensive attention globally especially with the COVID-19 outbreak. This raised a global concern and necessitated the adoption of digital learning since the COVID-19 has come to stay.

With the outbreak of Covid-19, classroom activities have been put on hold and the school curriculum disrupted. For learning to continue while the learners are at home, technology based pedagogy become an inevitable option. Therefore, there is the need to assess the readiness of lecturers and students for this paradigm shift in pedagogy occasioned by Covid-19. Consequently, the need to examine ICT, Education and Post Pandemic Realities: An assessment of Colleges of Education in North Central Nigeria.

Objectives of the Study

The main objective of this study was to examine ICT, Education and Post Pandemic Realities: An Assessment of Colleges of Education in North Central Nigeria. Specifically, the study examined:
1. available ICT facilities for teaching and learning in Colleges of Education in Post pandemic era.
2. present state ICT of teaching and learning facilities in schools in Post pandemic era..
3. adequacy of ICT facilities for lecturers and students in post pandemic era.
4. lecturers and students' awareness of ICT facilities for learning in the Post pandemic era.
5. lecturers and students access to ICT facilities in Post pandemic era..
6. extent of lecturers and students' utilization of ICT facilities for teaching and learning in Post pandemic era..

Research Questions

1. What are the available ICT facilities for teaching and learning in Colleges of Education in Post pandemic era?
2. What is the present state ICT of teaching and learning facilities in schools in Post pandemic era?
3. Are ICT facilities adequate for lecturers and students in the post pandemic era?
4. Are lecturers and students' awareness of ICT facilities for learning in the Post pandemic era?
5. Do lecturers and students have access to ICT facilities in Post pandemic era?
6. To what extent do lecturers and students' utilization of ICT facilities for teaching and learning in Post pandemic era?

Methodology

This study adopted descriptive survey design to examine ICT, Education and Post Pandemic Realities: An assessment of Colleges of Education in North Central Nigeria. A total of 571 lecturers and 975 students randomly sampled from Colleges of Education in north central, Nigeria.

A structured checklist for both the lecturers and students tagged 'availability, status, adequacy, awareness, accessibility, and utilization of ICT facilities questionnaire (ASAAAUICTF) designed by the researcher and duly validated by two experts in the Department of Computer Science and one specialist in educational technology from University of Ilorin. Its reliability coefficient was established using Cronbach reliability coefficient of 0.87 was used to collect data for the study. The checklist consisted of 120 items designed after an extensive review of literature related to the study. The items were placed on a 2-point rating scale of available and not available for research question 1 and functional and not functional for research question 2; a 4-point rating scale of Highly Adequate (HE) =4, Adequate (A) =3, Inadequate (IN)=2 and Grossly Inadequate (GI)= 1 for research question 3; a 3-point rating scale of very much aware (VMA)=3, partially aware (PA)=2, not aware (NA)=1 for research question 4; a 2-poiny rating scale of accessible and not accessible to research question 5 and a 4-point ration scale of highly utilized (HU)=4, utilized (U)=3, rarely utilized (RU)=2 and not utilized (NU)=1. 1,546 copies of

questionnaire were administered to 571 lecturers and 975 students randomly selected from seven Colleges of Education lecturers in north central, Nigeria with the help of 4 research assistants. The data collected were collated and analysed using means and percentage for answering the six research questions. A benchmark of 2.0 and 2.5 was adopted for a 3 and 4 point rating scale and 50% for percentage.

Results

Research question 1: What are the available ICT facilities for teaching and learning in Colleges of Education in Post pandemic era?

Table 1: Summary of lecturers and students responses on availability of ICT facilities in Post pandemic era

S/N	Items	Teacher			Student		
		N	Available	Not Available	N	Available	Not Available
1	Desktop computer	571	54.3	45.7	975	51.1	48.9
2	Laptop computers	571	51.6	48.4	975	40.4	59.6
3	Internet connectivity	571	42.1	57.9	975	40.3	59.7
4	Compute printers	571	51.4	48.6	975	51.4	48.6
5	Photocopier	571	50.6	49.4	975	50.1	49.9
6	Tape recorder	571	52.1	47.9	975	48.1	51.9
7	Radio set	571	51.3	48.7	975	49.4	50.6
8	Television	571	51.9	48.1	975	51.4	48.6
9	Handheld tablet	571	53.7	46.3	975	50.3	49.7
10	Project	571	30.5	69.5	975	48.7	51.3
11	Video conferences equipment	571	20.1	79.9	975	28.7	71.3
12	Public address system	571	48.2	51.8	975	44.5	55.5
13	Scanner	571	49.2	50.8	975	46.7	53.3
14	Digital camera	571	41.7	58.3	975	50.1	49.9
15	Interactive board	571	34.6	65.4	975	32.4	67.6
16	Mobile smart phone	571	52.7	47.3	975	54.4	45.6
17	Cable satellite	571	46.1	53.9	975	49.1	50.9
18	Virtual library	571	31.4	68.6	975	26.7	73.3
19	DVD	571	31.4	50.6	975	46.1	53.9
20	Modems	571	27.1	72.9	975	29.4	70.6

Using 50% as bench mark, Table 1 reveals that desktop computer, laptop computers, computer printers, photocopier, tape recorder, radio set, television, handheld tablet and mobile smart phone are available to both lecturers and students with over 50% of them ascertaining that availability of the ICT facilities. While projectors, video conferences equipment, digital camera, interactive board, cable satellite, virtual library, DVD and modems were not available for lecturers and students use.

Research question 2: What is the present state ICT of teaching and learning facilities in schools in Post pandemic era?

Table 2: Summary of lecturers and students responses on status of ICT facilities in Post pandemic era

S/N	Items	Teacher			Student		
		N	Functional	Not Functional	N	Functional	Not Functional
1	Desktop computer	571	58.1	41.9	975	62.1	37.9
2	Laptop computers	571	56.7	43.3	975	60.1	39.9
3	Internet connectivity	571	41.1	58.9	975	48.3	71.7
4	Compute printers	571	55.3	44.7	975	61.4	38.6
5	Photocopier machine	571	43.9	56.1	975	50.4	49.6
6	Tape recorder	571	51.4	48.6	975	55.2	44.8
7	Radio set	571	50.2	49.8	975	47.1	52.9
8	Television	571	58.4	41.6	975	40.1	59.9
9	Handheld tablet	571	56.5	43.5	975	59.2	40.8
10	Project	571	34.3	65.7	975	41.1	58.9
11	Video conferences equipment	571	34.7	65.3	975	47.6	52.4
12	Public address system	571	40.7	59.3	975	41.6	58.4
13	Scanner	571	49.4	50.6	975	43.2	56.8
14	Digital camera	571	40.6	59.4	975	46.1	53.9
15	Interactive board	571	48.1	51.9	975	38.2	61.8
16	Mobile phone	571	46.4	53.6	975	84.1	15.9
17	Cable satellite	571	47.1	52.9	975	41.6	58.4
18	Virtual library	571	38.4	61.6	975	40.1	59.9
19	DVD	571	42.6	57.4	975	42.3	57.7
20	Modems	571	42.6	57.4	975	41.6	58.4

From table 2, using 50% as bench mark, the following ICT equipment were functional according to the lecturers and students: desktop computer, laptop computers, computer printers, tape recorder, radio set, television, handheld tablet and while internet connectivity, photocopier, video conference equipment, digital camera, interactive board, mobile smart phone, cable satellite, virtual library and modems were not functional.

Research question 3: Are ICT facilities adequate for lecturers and students in the post pandemic era?

Table 3: Summary of lecturers and students responses on adequacy of ICT facilities in Post pandemic era

S/N	Items	Teacher		Student	
		N	Mean	N	Mean
1	Desktop computer	571	1.3	975	1.4
2	Laptop computers	571	2.5	975	1.7
3	Internet connectivity	571	2.1	975	1.1
4	Compute printers	571	1.3	975	1.3
5	Photocopy machine	571	2.1	975	1.2
6	Tape recorder	571	1.4	975	1.1
7	Radio set	571	1.4	975	1.2
8	Television	571	1.3	975	1.4

9	Handheld tablet	571	1.3	975	1.3
10	Project	571	1.4	975	1.4
11	Video conferences equipment	571	1.3	975	1.7
12	Public address system	571	1.4	975	1.3
13	Scanner	571	1.3	975	1.3
14	Digital camera	571	1.3	975	1.5
15	Interactive board	571	1.5	975	1.3
16	Mobile phone	571	1.3	975	1.3
17	Cable satellite	571	1.3	975	2.4
18	Virtual library	571	1.1	975	2.0
19	DVD	571	1.3	975	1.3
20	Modems	571	1.3	975	2.1
	Grand Mean		1.46		1.47

Table 3 shows that using a bench mark of 2.5 lecturers noted that ICT facilities were grossly inadequate for their use in colleges of education and students too affirmed same. For those ICT facilities that were available to the lecturers and students were insufficient in quality and quantum for teaching and learning. A grand mean of 1.46 and 1.47 for lecturers and students responses respectively revealed the ICT facilities were grossly in adequate in colleges of education in north central, Nigeria.

Research question 4: Are lecturers and students' awareness of ICT facilities for learning in the Post pandemic era?

Table 4: Summary of lecturers and students responses on awareness of ICT facilities in Post pandemic era

S/N	Items		Teacher		Student
		N	Mean	N	
1	Desktop computer	571	2.7	975	2.1
2	Laptop computers	571	2.4	975	2.4
3	Internet connectivity	571	1.8	975	2
4	Compute printers	571	2.6	975	2.5
5	Photocopy machine	571	1.6	975	2.4
6	Tape recorder	571	2.1	975	2.1
7	Radio set	571	2	975	2.2
8	Television	571	2.7	975	2.3
9	Handheld tablet	571	2.3	975	2.2
10	Project	571	1.6	975	2.1
11	Video conferences equipment	571	1.9	975	1.8
12	Public address system	571	2.5	975	2.1
13	Scanner	571	2.1	975	1.9
14	Digital camera	571	2.4	975	2.6
15	Interactive board	571	2.1	975	1.7
16	Mobile phone	571	2.3	975	2.5
17	Cable satellite	571	2.1	975	2.1
18	Virtual library	571	1.9	975	2

19	DVD	571	2.3	975	1.9
20	Modems	571	2.1	975	1.8
	Grand Mean		2.28		2.25

With a bench mark mean of 2.0, table 4 reveals that lecturers were aware of computer, laptop computer, internet connectivity, photocopier, radio set, television, handheld tablets, projector, public address system, scanner, digital satellite, virtual library, DVD, and modems. While students were aware of all the ICT facilities except video conference equipment, interaction board and virtual library. A grand mean of 2.28 and 2.25 for lecturers and student were partially aware of ICT facilities in college of education.

Research question 5: Do lecturers and students have access to ICT facilities in Post pandemic era?

Table 5: Summary of lecturers and students responses on accessibility to ICT facilities in Post pandemic era

S/N	Items	Teacher			Student		
		N	Accessible	Not Accessible	N	Accessible	Not Accessible
1	Desktop computer	571	48.1	51.9	975	43.6	56.4
2	Laptop computers	571	46.1	53.9	975	40.7	59.3
3	Internet connectivity	571	41.4	58.6	975	40.1	59.9
4	Compute printers	571	48.6	51.4	975	41.7	58.3
5	Photocopy machine	571	47.1	52.9	975	40.6	59.4
6	Tape recorder	571	40.4	59.6	975	44.5	55.5
7	Radio set	571	41.4	58.6	975	41.9	58.1
8	Television	571	49.4	50.6	975	47.1	52.9
9	Handheld tablet	571	45.3	54.7	975	49.6	50.4
10	Project	571	41.1	58.9	975	48.1	51.9
11	Video conferences equipment	571	40.1	59.9	975	39.7	60.3
12	Public address system	571	46.3	53.7	975	48.6	51.4
13	Scanner	571	42.4	57.6	975	43.3	58.7
14	Digital camera	571	41.8	58.2	975	40.7	59.3
15	Interactive board	571	40.6	59.4	975	44.1	55.9
16	Mobile phone	571	52.1	57.9	975	41.4	58.6
17	Cable satellite	571	33.4	66.6	975	41.2	58.8
18	Virtual library	571	40.7	59.3	975	39.8	60.2
19	DVD	571	44.1	55.9	975	40.1	59.9
20	Modems	571	49.4	50.6	975	41.7	58.3

Table 5 with a bench mark of 50% reveals that lecturers and students had no access to any of the ICT facilities in colleges of education in north central Nigeria.

Research question 6: To what extent do lecturers and students' utilization of ICT facilities for teaching and learning in Post pandemic era?

Table 6: Summary of lecturers and students responses on utilization of ICT facilities for Post pandemic era

S/N	Items	Teacher		Student	
		N	Mean	N	Mean
1	Desktop computer	571	2.9	975	2.2
2	Laptop computers	571	2.1	975	3.4
3	Internet connectivity	571	2.4	975	2.9
4	Compute printers	571	2.4	975	1.8
5	Photocopy machine	571	2	975	2.1
6	Tape recorder	571	1.8	975	2.4
7	Radio set	571	1.9	975	2.1
8	Television	571	1.7	975	1.9
9	Handheld tablet	571	2.3	975	3.1
10	Project	571	1.9	975	1.7
11	Video conferences equipment	571	1.8	975	2.3
12	Public address system	571	2.3	975	2.1
13	Scanner	571	2.2	975	2.4
14	Digital camera	571	1.9	975	1.8
15	Interactive board	571	2.3	975	1.7
16	Mobile phone	571	2.4	975	3.3
17	Cable satellite	571	2.7	975	1.9
18	Virtual library	571	2.2	975	2.1
19	DVD	571	2.4	975	2.3
20	Modems	571	2.1	975	2.0
	Grand Mean		2.19		2.28

Table 6 reveals that with a bench mark mean of 2.5, lecturer utilize computer, but do not utilize other ICT facilities. While students utilize laptop computers, internet connectivity, handheld tablets, mobile smart phone. A grand mean of 2.19 and 2.28 respectively shows that lecturer and students rarely utilize ICT facilities in colleges of education in north central, Nigeria.

Discussion

The data on the availability of ICT facilities in colleges of education in north central in post pandemic reliabilities showed that desktop computer, laptop computers, computer printers, photocopier, tape recorder, radio set, television, handheld tablet and mobile smart phone were available to both lecturers and students. This implied that the provision of ICT facilities is still very low in colleges of education in north central, Nigeria. This is in agreement with the finding of Tella, Tella, Toybo, Adika, and Adeyinka (2007) who reported low availability of ICT facilities in Nigeria schools. This result is also in agreement with that of Apagu et al (2015), Eze and Aja (2014) and Jegede (2013) who variously noted shortage of the ICT facilities in secondary schools and higher institutions of learning. The non-availability of ICT will no doubt put many students at disadvantage in the application and utilization of ICT learning while lecturers would face challenges of not been able to give students the desired attention to explain difficult concepts to their knowledge and such predicament would narrow the opportunities available to stimulate students for further usage of the ICT facilities for independent learning beyond the normal classroom interaction.

The finding on the adequacy of ICT facilities for lecturers and students shows that ICT facilities were rated as grossly inadequate in post pandemic reliabilities in colleges of education in north central, Nigeria.

Given the dismal rating on availability as reported in table 1, only a similarly dismal rating could have been expected in respect of adequacy. This findings buttresses Ademiluyi (2012) that indicated that for students to have the best benefits from ICT, the facilities must not only be available but also adequate. Where the facilities are unavailable, they cannot be adequate.

Finding on lecturers and students awareness of ICT facilities in post pandemic realities revealed that lecturers and students were partially aware of ICT facilities in colleges of education in north central, Nigeria. This implies that lecturers were not aware of majority of the ICT facilities available for teaching. This finding agrees with the work of Thakur (2020) that found out that lecturers were unaware of some ICT facilities. Conversely, the finding disagreed with that of Jumare, Tahir and Hamid (2017) and Timothy, Olufunke and Paul (2015) who found lecturers to be aware of availability of ICT facilities in the universities they teach. The disagreement in the findings could be due to the fact that the studies were carried out in different tertiary institutions.

The findings on accessibility revealed the both lecturers and student do not have access to ICT facilities in post pandemic reliabilities. The responses showed that accessibility to ICT facilities by both students and lecturers in colleges of education is gradually drifting from not accessible to fairly accessible. This implied that most ICT facilities were not accessible in colleges of education under study. In line with this findings, Oyoboade and Ajibole (2017) work collaborated this finding that students had access to only television at school, interactive whiteboard, internet, and computers.

The data on utilization of ICT facilities revealed rare utilization of ICT in teaching and learning process in colleges of education in north central Nigeria in post pandemic reliabilities by lecturers and students. This implies that lecturers and teachers would have limited opportunities and capabilities in using ICT facilities to expand their knowledge and skills in curriculum information. Consequently the quality of education being given to learner, would be inadequate and reflect in low outcome. The result showed that lecturers and students had similar opinion on the utilization of ICT facilities. These further confirmed that both lecturers and student are constrained by inadequate ICT facilities to advance teaching and learning.

Conclusion
ICT facilities are indispensable tool in fostering teaching and learning, non-availability and inadequacy in the provision of ICT facilities inhibits student educational opportunities in the post pandemic reliabilities. The stakeholder in colleges of education should be proactive in carrying out periodic need, assessment to determine the gaps in ICT facilities. The strong commitment and among stakeholders, driven by the unwavering political will of the convenient and anchored by the NCCE would no doubt strengthen the colleges of education in the training of the utilization of ICT facilities by lecturers in linking their teaching to global research, networks by sharing ideas with experts in other discipline, wide their knowledge, skills and experience beyond the shape, structure and limitations of conventional method, that are used in traditional discipline in instructional delivery and achieving better learning out come in students in the post pandemic reliabilities. A cursory look at the colleges of education in Nigeria reveals that lecturers in the system rely heavily on the traditional "chalk and talk" method of teaching rather than embracing the use of ICT. Very few public colleges of education in Nigeria makes use of contemporary ICT facilities for classroom instructions. Thus, the chalkboard and textbooks continue to dominate teaching and learning activities in the post pandemic reliabilities. Finally, the application and integration of ICT in colleges of education in north central, Nigeria pedagogy depends on the availability of relevant resources and the ICT-dexterity of the teachers.

Recommendations

Arising from the conclusion, the following recommendations were made:

1. Government should partner with private organization to provide colleges of education with ICT facilities in post pandemic realities
2. Colleges of education in North central should establish equipment maintenance unit in the Center for Educational Technology to carry out repairs on non-functional ICT facilities
3. Government and stakeholders in colleges of education should take population of lecturers and students into consideration in the procurement of ICT facilities in post pandemic realities.
4. Awareness should be created through workshop and ICT related training by educational institutions for lecturers to be aware of the available ICT facilities needs in the post pandemic era. In a similar vein, students should be equally sensitize on available ICT facilities needed in the post pandemics era.
5. Lecturers and students should be allowed access to use the available ICT facilities during the teaching learning process in post pandemic realities
6. Lecturers should utilize available ICT facilities whenever they are teaching to keep students abreast of how this facilities are used. Also, seminars and workshop should be organized on application, integration and utilization of ICT facilities in teaching for lecturers who are not ICT oriented to enable them utilize ICT facilities more often during teaching.

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