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Availability and Accessibility of ICTS In Teaching by Lecturers of Federal University, Wukari, Taraba State

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Abstract
Information and Communication Technology (ICT) has played a significant role in teaching, learning, and research in Nigeria. ICT facilities and devices have been established to aid learning in higher institutions. However, despite the numerous benefits of ICT in teaching and learning, the deployment of ICT in Nigerian Tertiary Institutions is faced with enormous challenges. This study, therefore, was designed to investigate the level of availability and accessibility of ICT in teaching by Lecturers at Federal University, Wukari, and Taraba State. A survey design was adopted. The population comprised 278 lecturers. Data were collected using a questionnaire and interview schedule. Analysis of data was carried out with SPSS, using frequency distribution, while interview responses were transcribed, and themes were identified using Nvivo version 12.This study found that the level of ICT infrastructure facilities available for teaching at Federal University, Wukari, is high. It also shows the extent of accessibility of ICT infrastructure facilities for teaching at Federal University, Wukari is moderate.

Keywords: *Availability, Accessibility, Information and Communication Technology, Teaching, Federal University Wukari, Nigeria*

1.1 Introduction

Digital transformation is the centerpiece of operational efficiency and innovation across the globe. It has affected all spheres ranging from economy, governance, security, and education among others. In education, some regions of the world have a great capacity in scaling up digital infrastructure than others to meet up with prevailing realities. According to Susan G., and the 2019–2020 Educause IT, (2020), Educause research statistics showed that 13% of higher institutions today are engaged in digital transformation, 32% are at the stage of developing a digital transformation strategy, and 38% of higher institutions are exploring digital transformation, with only remaining 17% of institutions investing no time and effort in it at all. Though institutions of higher learning are driving toward digital transformation, the progress is not yet evenly distributed. Much is desired particularly from the developing economy. This involved intentional efforts and proactive management with defined directions and values to achieve. Hence, for the developing economy to meet up with the Structural Development Goals (SDG), the need to give digital transformation

a hard push is required to meet global trends in education.

This study, therefore, investigates the progress made so far at the Federal University Wukari by ascertaining the availability and accessibility of ICT used in teaching and learning which is one of the primary indicators for actualizing the SDG goal.

1.2 Research Objectives

1. Investigate the availability of ICT infrastructure facilities for teaching for lecturers at the Federal University, Wukari.
2. Investigate the accessibility of ICT infrastructure facilities for teaching by lecturers at the Federal University, Wukari.

1.3 Research Questions

1. What is the level of availability of ICT infrastructure facilities for teaching by lecturers at the Federal University, Wukari?

2. To what extent are ICT infrastructure facilities accessible to lecturers for teaching at the Federal University, Wukari?

2.1 Literature Review

2.2 Information and Communications Technology (ICT) Infrastructure

Information and communication technology (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share, or exchange information (UNESCO, 2017). These technological tools and resources include computers (software, hardware, and firmware), the Internet (websites, blogs, and emails), live broadcasting technologies (radio, television, and webcasting), recorded broadcasting technologies (podcasting, audio, and video players, and storage devices) and telephony (fixed or mobile, satellite, video-conferencing. These technologies are used by organizations, institutions of learning, and corporate bodies to facilitate unbroken operations and or learning. Rapid development in information and communication technology (ICT) infrastructure over time enables seamless educational, economic, and political growth, leading to a significant effect on the nation's growth. Suffice it to say, Information and Communication Technology (ICT) infrastructure is a leading growth enabler in countries that have realised its importance.

Not surprisingly, therefore, many developing nations are working hard to internalise ICT, balancing the limited allocation of their revenues, to catch up rapidly with the developed economies (Rudra, Girijasankar, and Tapan, 2018). The availability and accessibility of Information and communication technology (ICT) infrastructure plays a substantial role in catalysing economic growth, especially in today's era of internet and mobile telecommunication. Therefore, building ICT infrastructure can pave the way for a digital leap forward. ICT technologies have overcome gaps in several key sectors including education, agribusiness, communications, and financial sector, unlocking better jobs, developing skilled and educated intellectuals, more effective tracking logistics for supply chains, and even improved healthcare outcomes (Trendov, Varas, and Zeng2019; Drossel, Eickelmann, and Vennemann, 2020).

This is why ICT infrastructure is the cornerstone of innovation, enabling the transformation of education, businesses, cities, and nations around the world (New, 2022). The deployment of ICT in organisations and Institutions of learning accelerates its utilization and also, deepens ICT skills acquisition among users.

2.3 Availability of ICTs in Teaching in Nigerian Universities

There are developments in the Nigerian education sector that indicate some level of ICT application in Nigerian schools (Matthew, Joro, and Manasseh, 2015).

These came about as a result of the Federal Government of Nigeria, National Policy on ICT in Education (FGN National Policy on ICT in Education, 2019), which recognizes the prominent role of technology in the modern world and has integrated ICT into education in Nigeria. It should be noted that despite the roles of ICT can play in tertiary education in Nigeria, schools have not still extensively adopted it for teaching and learning. The Federal Government is doing everything possible to integrate ICT into the school system for a better outcome (Matthew, Joro, and Manasseh, 2015).

This is a recognition of the need to go beyond computers to the level of ICT infrastructure in schools. According to Sibanda, Mapenduka, and Furusa (2016), ICT infrastructural facilities for teaching and learning in schools include computers, radios, televisions, wireless technologies, interactive boards, internet, email, e-learning applications, video conferencing, and projectors among others. Information and Communication Technology ICT also, as described by Scott,(2002) as cited in Agbetuyi, and Oluwatayo, (2012) encompasses a range of applications, communications, and technologies that aid information retrieval and research communication and administration. These include online databases, library and online services, and fax machines. It has become a global phenomenon of great importance and concern in all aspects of human endeavor, spanning education, governance, business, labour, market, shares, productivity, trade, agriculture, commerce, and others.

2.4 Accessibility of ICTs in Teaching and Learning in Nigerian Universities

The accessibility of ICT facilities for teaching and learning is the rate or degree to which this equipment is used by intended users Al'Mamary, (2022).Information and Communication Technology accessibility requires ease of use Ohliati, and Abbas, (2019), but it also requires flexibility of ICT facilities in the educational Qashou, (2021). ICT enables the use of innovative educational resources and the renewal of learning methods, establishing a more active collaboration of students and the simultaneous acquisition of technological knowledge. Evroro, and Okumoku-Evroro, (2014) stated that education of any kind not based on information and communication technology will be classified as outdated and not in tune with the present realities. Recently, Villegas-Ch, Jácome-Vásconez, García-Ortiz, Calvache-Sánchez, and Sánchez-Viteri, (2022) reported from the model advocating the use of ICT in tertiary education where it was discovered that the results obtained determine the inclusion of ICT in the classroom is necessary since it improves the academic performance of those students in the study group. This is because the world, Nigeria inclusive has become a global village and education has become global as nations agree to uphold high standards of technology and development in every industry.

The use of information and communication technology cannot be overemphasized in our educational system. Lecturers and students must have access to ICT facilities to become adequately equipped with the intellectual and professional ICT skills required for their assignment and to make them adaptable to any organizing situation not only in their country but in the world at large. The need to adapt to the

changing environment in the education system by equipping lecturers and students with ICT knowledge is imperative.

3.1 Methodology

A survey research design was adopted for the study. The research location was Federal University, Wukari, Taraba State, Nigeria. The population of the study was 910 lecturers at the University. Simple random sampling techniques were used to arrive at the appropriate sample size of278. Data was collected using a questionnaire and interview. Ninety-eight (98) % of the questionnaire was collected, representing 79%retrieval. The questionnaire was subdivided into Part A with Section 1: collected Demographics data. Part B with2 sections that collected the following data on ICT for teaching: Section 1: Level of Availability of ICT in Federal University, Wukari, Section 2: Level of Accessibility of ICT in Federal University, Wukari. Frequency and percentage distribution were used to describe the socio-demographic characteristics of the respondents and other variables in the study using SPSS 21. Interview data were analyzed using thematic analysis with the aid of Nvivo version 12.

4.1 Presentation of Results and Discussion of Findings

The results of the analysis and the interpretation of data collected from respondents through close-ended questionnaires and interviews are based on the research objectives and research questions.

4.2 Demographic Distribution of the Respondents

This section shows the demographic information of respondents that participated in the study based on sex, age range, academic status (lecturers), and faculty. The results of the analyzed demographic distribution of lecturers are presented.

The frequency distribution of the demographic profile of Lecturers of Federal University, Wukari showed that 174 (74.7%) of the respondents were males, while 34 (14.6%) were females. Also, 41 (17.6%) of them were between the age range of 20 – 30years, 98 (42.1%) were between 31 – 40years, 54 (23.2%) were between 41 – 50years, 20 (8.6%) were between 51 – 60years, while 1 (0.4%) was between 60years and above. On their academic status, 6 (2.6%) were professors, 20 (8.6%) were associate professors, 25 (10.7%) were senior lecturers, 38 (16.3%) were lecturer I, 45 (19.3%) were lecturer II, while 87 (37.3%) were assistant lecturers. Likewise, 50 (21.5%) of this group of respondents were in the faculty of Agriculture and Life Science, 100 (42.3%) were in Humanities, and Management while and 83 (35.6%) were in Pure and Applied Science.

4.3 Data Analysis

Research Question One: What is the level of availability of ICT infrastructure facilities for teaching by lecturers at Federal University, Wukari?

The different responses of respondents as regards the availability of ICT infrastructure facilities for teaching by lecturers at Federal University, Wukari is presented in Tables 1.1 and 1.2 respectively.

Table 1.1: Availability of ICT Infrastructure Facil ities for Teaching by Lecturers

ICT-based Teaching and Learning tools	Strongly Agree (%)	Agree (%)	Undecided (%)	Disagree (%)	Strongly Disagree (%)	Mean	Std. Dev.
There are computer systems available for teaching in my institution of learning	46 (19.9)	76 (32.9)	10 (4.3)	54 (23.4)	45 (19.5)	3.10	1.462
Internet Facilities are available for teaching on campus	23 (10.0)	69 (29.9)	26 (11.3)	73 (31.6)	40 (17.3)	2.84	1.298
I have an e-mail account	143 (62.4)	72 (31.4)	7 (3.1)	5 (2.2)	2 (0.9)	4.52	.741
Projectors are available for teaching in my institution	38 (16.5)	80 (34.6)	36 (15.6)	56 (24.2)	21 (9.1)	3.25	1.247
There are Public Address Systems (P.A.S) in the school	54 (23.5)	120 (52.2)	16 (7.0)	30 (13.0)	10 (4.3)	3.77	1.082
There are E-Library learning facilities	38 (16.7)	90 (39.5)	30 (13.2)	48 (21.1)	22 (9.6)	3.32	1.249
There is an availability of printers for print-out of learning materials by students	34 (14.7)	75 (32.5)	28 (12.1)	58 (25.1)	36 (15.6)	3.06	1.339
There exist Social-Media Platforms for Learning	24 (10.6)	62 (27.3)	41 (18.1)	63 (27.8)	37 (16.3)	2.88	1.272
Stored lecture notes on CD-ROM or other electronic storage devices are available to students for learning	17 (7.4)	46 (20.0)	47 (20.4)	60 (26.1)	60 (26.1)	2.57	1.272
There is a computer training center for Lectures on campus	23 (10.3)	80 (35.9)	30 (13.5)	50 (22.4)	40 (17.9)	2.98	1.312

Table 1.1 shows an analysis of respondents' responses as regards the availability of ICT infrastructure facilities for teaching by lecturers. It shows that the majority of the lecturer respondents 122 (52.8%) agreed that there are computer systems available for teaching in the institution, 10 (4.3%) were undecided, while 99 (42.9%) disagreed. Also, 118 (51.1%) agreed that projectors are available for teaching in the institution, 36 (15.6%) were undecided, and 77 (33.3%) disagreed. More so, 174 (75.7%) agreed that there are Public Address System (P.A.S) for teaching in the institution, 16 (7.0%) were undecided, while 40 (30.7%) disagreed. Meanwhile, 215 (93.8%) of the respondents claimed they have an email account, 7 (3.1%) were undecided, and 7 (3.1%) did not.

However, as many as 113 (48.9%) respondents disagreed that Internet Facilities are available for teaching on campus, 26 (11.3%) were undecided, and 92 (39.9%) agreed. Likewise, 100 (44.1%) respondents disagreed that there exist Social-Media platforms for learning, 41 (18.1%) were unaided, and 86 (37.9%) agreed. And 120 (52.2%) respondents disagreed that stored lecture notes on CD-ROM or other electronic storage devices are available to students for learning, 47 (20.4%) were undecided, and 63 (27.4%) agreed.

Based on the information provided above, a good number of ICT infrastructure facilities such as; computer systems, projectors, public address systems, and E-library, among others are available for

teaching at Federal University, Wukari. Although some other ICT facilities are said not to be available for teaching these include lecture notes on CD-ROM, social media platforms, and internet facilities. Therefore, to measure the ***Lecturers'*** level of ***ICT infrastructure facilities availability*** at Federal University, Wukari, answers provided in Table 1.1 are recorded and categorised, and the result is provided in Table 1.2.

Table 1.2: Level of ICT Infrastructure Facilities Availability for Teaching by Lecturers

Level of ICT Infrastructure Facilities Availability for Teaching by Lecturers	Frequency	Percentage (%)
High Level	88	37.8
Moderate Level	95	40.8
Low Level	50	21.5

Table 1.2 shows the level of ICT infrastructure facilities available at Federal University, Wukari for teaching. It revealed that the level of ICT infrastructure facilities available at Federal University, Wukari, for teaching is moderate. To strengthen the findings of this research, interview sessions were also conducted with some lecturers. Their responses to this question also gave similar views. When the lecturers were asked if there is ICT infrastructure facilities availability teaching, the various responses were categorised into nodes. It revealed that the majority of the lecturers agreed that ICT infrastructure facilities are available for teaching. Figure 1.1 shows the nodes of the availability of ICT infrastructure facilities for teaching by lecturers.

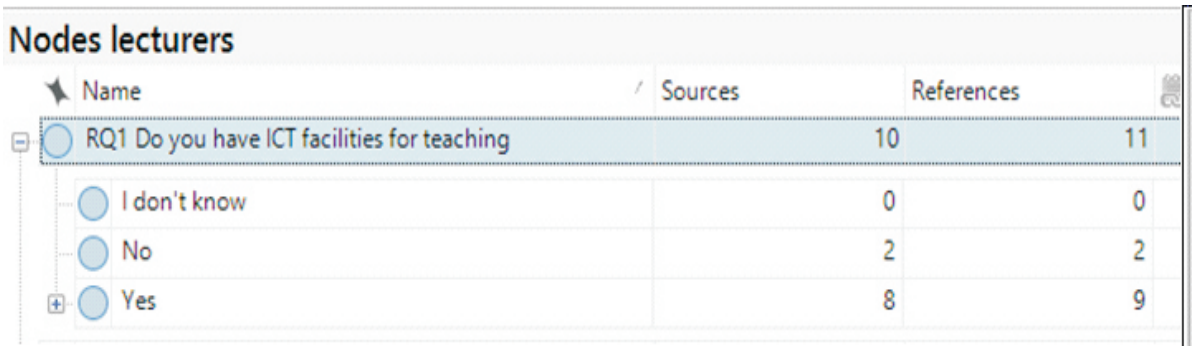

Figure 1.1 Screenshot of Interface showing respondent's responses on the availability of ICT infrastructure facilities for teaching

Also, these nodes were later subjected to Nvivo query analysis to reveal the major themes of participants' responses. Figure 1.2 shows the world cloud for the central themes identified under the availability of ***ICT infrastructure facilities for*** teaching is "yes", "central", "department", "faculty", and "functional" among others.

Figure 1.2: Word Cloud for the Availability of *ICT* Infrastructure Facilities for Teaching

From the word cloud presented in Figure 1.2, it is obvious that the major theme in the respondents' responses is "yes". This show that the majority of the respondents agreed that ***ICT infrastructure facilities are available for*** teaching at Federal University, Wukari. Other themes like "central", "department", and "faculty" shows the location where the ***ICT infrastructure facilities can be found in the University.***

Excerpts from the interview transcript are presented below.

"Yes, we have ICT facilities at a central place" (Male/Lecturer I/Humanities and Management Science)

"We have a center for teaching and learning at the faculty level, accessible to students" (Male/Lecturer II/Agriculture and Life Science)

"Yes, at the department level" (Male/ Lecturer II/ Humanities and Management Science)

Based on the information provided in Tables and Figures under this research question, it can be said that the majority of the respondents attested to the availability of many ICT facilities for teaching. Therefore, it is evident, that the level of ICT Infrastructure Facilities Availability for teaching at Federal University, Wukari, is Moderate.

Research Question Two: To what extent are ICT *infrastructure facilities* accessible to lecturers for teaching by lecturers at Federal University, Wukari?

The different responses of respondents as regards the accessibility of ICT infrastructure facilities for teaching by lecturers at Federal University, Wukari is presented in Tables 1.3 and 1.4 respectively.

Table 1.3: Accessibility of ICT Infrastructure Facilities for Teaching by Lecturers

ICT-based Teaching and Learning tools	Strongly Agree (%)	Agree (%)	Undecided (%)	Disagree (%)	Strongly Disagree (%)	Mean	Std. Dev.
Computer systems are accessible for teaching in my institution	35 (15.2)	67 (29.0)	21 (9.1)	68 (29.4)	40 (17.3)	2.95	1.374
Internet Facilities are accessible for teaching and learning on campus	19 (8.2)	58 (25.0)	33 (14.2)	87 (37.5)	35 (15.1)	2.74	1.222
There is access to an email account	52 (22.8)	98 (43.0)	28 (12.3)	36 (15.8)	14 (6.1)	3.61	1.177
Projectors are accessible for teaching in my institution	25 (11.2)	84 (37.7)	36 (16.1)	51 (22.9)	27 (12.1)	3.13	1.236
Public Address System (P.A.S) is accessible in the school	29 (12.6)	120 (52.2)	26 (11.3)	40 (17.4)	15 (6.5)	3.47	1.116
E-Library learning facilities are accessible in my school	25 (10.9)	76 (33.2)	36 (15.7)	69 (30.1)	23 (10.0)	3.05	1.215
Printers and photocopier machines are accessible for a printout of teaching materials in my Institution	49 (21.1)	73 (31.5)	37 (15.9)	44 (19.0)	29 (12.5)	3.30	1.330
There is access to Academic Social Networking Platforms	20 (9.3)	61 (28.4)	51 (23.7)	52 (24.2)	31 (14.4)	2.94	1.216

Table 1.3 shows an analysis of respondents' responses as regards the accessibility of ICT infrastructure facilities for teaching by lecturers. It shows that the majority of the lecturer respondents 109 (48.9%) agreed that projectors are accessible for teaching in the institution, 36 (16.1%) were undecided, and 78 (35%) disagreed. Also, 149 (67.8%) agreed that Public Address System (P.A.S) is accessible for teaching in the institution, 26 (11.3%) were undecided, while 55 (23.9%) disagreed. Likewise, 101 (44.1%) agreed that E-Library learning facilities are accessible for teaching in the institution, 36 (15.7%) were undecided, and 92 (40.1%) disagreed. More so, 122 (52.6%) agreed that Printers and photocopier machines are accessible for printing out teaching materials, 37 (15.7%) were undecided, and 73 (31.5%) disagreed. And 150 (65.8%) of the respondents claimed they have access to their email account, 28 (12.3%) were undecided, and 50 (21.9%) did

not have access to it.

However, for this group of respondents, 108 (46.7%) disagreed that computer systems are accessible for teaching in the institution, 21 (9.1%) were undecided, and 102 (44.2%) agreed to this. Also, 122 (52.6%) respondents disagreed that Internet facilities are accessible for teaching on campus, 33 (14.2%) were undecided, and 77 (33.2%agreed. Likewise, 83 (38.6%) respondents disagreed that academic social networking platforms are accessible, 51 (23.7%) were undecided, and 81 (37.7%) agreed. This shows that a good number of ICT infrastructure facilities such as projectors, public address systems, E-library, and Printers among others were accessible for teaching at Federal University, Wukari. Therefore, to measure ***the Lecturers'*** extent of ***ICT infrastructure facilities accessibility*** at Federal University, Wukari, answers provided in Table 1.3 were recorded and categorised. The result is provided in Table 1.4.

Table 1.4: Extent of ICT Infrastructure Facilities Accessibility for Teaching by Lecturers

The extent of ICT Infrastructure Facilities Accessibility for Teaching by Lecturers	Frequency	Percentage (%)
Great Extent	78	33.5
Moderate Extent	92	39.5
Low Extent	63	27.0

Table 1.4 shows the extent of ***ICT infrastructure facilities accessibility*** at Federal University, Wukari for teaching. It revealed that the extent of ***ICT infrastructure facilities accessibility*** at Federal University, Wukari, for teaching is moderate.

To support this result, interview responses as regards this were also subjected to Nvivo analysis. When the lecturers were asked if these ***ICT infrastructure facilities are accessible*** for teaching, the various responses given were categorised into nodes. It revealed that the majority of the lecturers agreed that ***ICT infrastructure facilities are accessible for*** teaching at Federal University, Wukari. Figure 1.3 shows the nodes of the accessibility of ***ICT infrastructure facilities for*** teaching by lecturers.

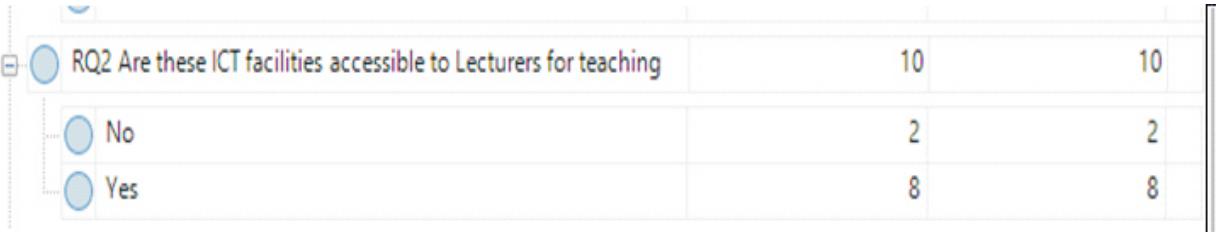

Figure 1.3 Screenshot of Interface showing respondents' responses on the accessibility of *ICT infrastructure facilities for* teaching

These nodes were subjected to Nvivo query analysis to reveal the major themes from the participants' responses. Figure 1.4 shows the world cloud for the central themes identified under the accessibility of ***ICT infrastructure facilities for*** teaching, theseare “yes”, “on request”, “accessible”, “and guaranteed”, among others.

Figure 1.4: Word Cloud for the Accessibility of ICT Infrastructure Facilities for Teaching

From the word cloud presented in Figure 1.4, it is obvious that the major theme in the participants' responses is "yes". This show that the majority of the respondents agreed that ***ICT infrastructure facilities are accessible for*** teaching at Federal University, Wukari. Other themes like "on request", "accessible", and "guaranteed" all show the variation to the answer "yes".

Below are a few quotes from the interview excepts.

"They are accessible, because in a week or let me say in a month we have about three to four classes"(Male/Lecturer II/Humanities and Management Science)

"Yes, when you need them, you request for them, and will be made available for use for teaching and learning" (Male/Lecturer II/Agriculture and Life Scien*ce).*

However, one of the lectures stated categorically that although they enjoy enough access to the ICT facilities on campus students' access to the facilities for learning is what he cannot assure.

"To us the lecturers, we can easily access them, but when it comes to teaching, passing the knowledge to students, the accessibility is not guaranteed"(Male/Assistant Lecturer/ Pure and Applied Science)

In conclusion, from the information provided in Tables and Figures under this research question, it can be said that most of the respondents attested to the accessibility of many ICT infrastructure facilities for teaching. Therefore, it is evident, that the extent of ICT infrastructure facilities accessibility for teaching at Federal University, Wukari is moderate.

5.1 Discussion of Findings

This study found that the level of ICT infrastructure facilities available for teaching at Federal University, Wukari, is moderate. Most of the respondents attested to the

availability of ICT infrastructure facilities for teaching and learning, this includes computer systems, projectors, public address systems, and E-library, among others available at Federal University, Wukari. Although it was revealed that lecture notes on CD-ROM or other electronic storage devices are available to students for learning, while the importance of storage devices is not undermined, it may be argued that the non-use of CD-ROM is due to the availability of other means which a good number of the respondent agreed that they are available this includes an email account, social media platforms among others.

This high level of *ICT infrastructural facilities available at* Federal University, Wukari, Taraba State, could be said to be a testament to the government's commitment to putting Nigeria on the global map of e-learning. The research is in agreement with the report of Olatunde, Eyiolorunse, and Ogunode, (2021) which revealed that there are available digital resources used for teaching and learning, which is necessitated by the pandemic as a medium used to see to it that there were continuous academic activities in schools. The authors quickly suggested that the trend should be maintained and improved upon. More to that, Atsumbe, Raymond, Enoch, and Patrick, (2012) in the study "the availability and utilisation of e-learning infrastructures in Federal University of Technology, Minna" strongly stressed the government's commitment to implementing ICT in education, as e-learning infrastructures are available in the University for teaching and learning, but quickly stated also that the process seems to be confronted with several challenges.

This finding also aligns with the finding of Sibanda, Mapenduka, and Furusa (2016), who reported that ICT common infrastructural facilities for teaching and learning available include computers, televisions, wireless technologies, interactive boards, the internet, e-learning applications, video conferencing, and projectors among others. According to Atsumbe, et al, (2012), the federal government had a positive mind toward ensuring the application of ICT in tertiary education, this is envisaged again in the findings of this research. With the pandemic issue, given schools some push to meet up with the trend in ICT in education, there is an indication that the federal government will maintain the status core and even build on this success story so far.

Education delivery via electronic media is becoming relevant in Nigeria's educational systems, especially the higher institutions of learning (Folorunso, Shawn, and Sharma, 2006). The benefit to the University is quite enormous now in 2021 (Gordon, and Gabriel, 2021). The focus of SDG 4 is "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". Information and Communication Technology usage has the potential to broaden access to information as a means of teaching and learning by many, anywhere, anytime, and at your pace. This will make learning equitable much easier. Unfortunately, the progress made so far is not so encouraging whereJohn, Pius, Waziri, Khadeejah, and Tunde, (2021)stated that even when Nigeria wants to meet up with the SDG goals, the obstacles to **ICT** availability and usage are so massive. These include inadequate funding and the near absence of ICT support infrastructures such as internet connection and power supply. Most recently, Nigerian public universities were shut down for about 8 months due to the near absence of basic needs to keep the system running in a digital age. There were calls to revitalise the public universities in Nigeria holistically, with ICT facilities inclusive. It is, therefore, important to emphasize that there is a need for improvement in the provision of ICT facilities on Nigerian University Campuses.

Taking a cue from the submission of Agim, Iroeze, Osuji, and Obasi-Haco (2018)

who expressed that availability not only means that the "thing" is provided but also entails accessibility. It is believed that availability is meaningless if the users cannot access the facilities. This study found that several ICT infrastructure facilities such as computer systems, projectors, public address systems, E-library, and Printers among others were accessible for teaching and learning at Federal University, Wukari. The moderate level of accessibility is due to the ICT points of service in the university. As listed by the respondents, the main computer lab observed by the authors of the article in the course of the study is the central lab to corroborate with respondents' assertions, where teaching takes place periodically. Besides, there is a computer lab in the computer science department, which was not as equipped as the facilities at the main central computer lab based on observation too. However, this does not undermine the call for improvement in ICT facilities as suggested by some of the respondents. This corroborated the submission of Nwosu, John, and Akorede, (2018) that carried out a study and reported the accessibility of ICT-based instructional tools in the Medical Colleges in Ogun State, Nigeria is moderate, and the need for improvement.

Conclusion

The importance and the need for ICT in today's academic world cannot be undermined. Not only has ICT reshaped the learning process of our society, but it has also dictated the future of our knowledge world, hence the quest for major institutions of learning, across the globe, to join this course so as not to be left out. This study, therefore, concludes that Federal University, Wukari, is one of the institutions that understand these new times of our knowledge world as there is a high level of ICT infrastructure facilities available for teaching, even though the accessibility of these ICT infrastructure facilities should be improved to fully maximize its benefit.

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