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TECHNOLOGY-BASED FACTORS CHALLENGING LECTURERS' UTILIZATION OF INFORMATION COMMUNICATION TECHNOLOGY IN TEACHING IN NNAMDI AZIKIWE UNIVERSITY, AWKA, ANAMBRA STATE

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ABSTRACT

This study examined Technology-Based Factors Challenging Lecturers Utilization of Information Communication Technology in Teaching in Nnamdi Azikiwe University, Awka, Anambra State. One research question guided the study, also, one null hypothesis was formulated and tested in the study. A descriptive survey research design was employed to conduct the study. Population for the study consisted of all the 1,964 Heads of Departments (HODs) together with lecturers within 91 Departments from 14 Faculties in Nnamdi Azikiwe University (NAU), Awka, Anambra State. The sample size for the study comprised a total of 1,440 participants, incorporating 65 HODs and 1,375 lecturers selected from 14 Faculties in the university (NAU) using a stratified random sampling technique. A researchers' self-developed questionnaire titled: Technology-Based Factors Challenging Lecturers Utilization of ICT in Teaching Questionnaire (TBFCLUICTITQ) which was constructed for the HODs and lecturers, containing 5 items and designed on a 4-point scale, was used for data collection. The research instrument was validated by two experts from Educational Management and Policy Department and one expert from Measurement and Evaluation Unit, Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State. Reliability of the questionnaire was established through a pilot-test sampling 5 HODs and 15 lecturers from one federal university in Enugu State, which was not part of the study. The result obtained from the data collected was computed and the coefficient value was measured using the Cronbach Alpha method to give an internal consistency reliability (r) - value of 0.79, showcasing that the questionnaire was reliable. Data collated for the study were analyzed using mean scores and standard deviation in order to answer the research question. The hypothesis was tested at an alpha level of 0.05 significance using the t-test statistics. Findings of this study revealed that the technology-based factors were challenging to lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State. The difference in the mean rating of HODs and lecturers on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State was not significant. The study recommended that; the University Management in conjunction with National Universities' Commission (NUC) together with financial support from the government and the private sector should curb

the technology-based factors challenging lecturers' utilization of information communication technology in teaching in NAU, Awka, Anambra State.

Keywords: Technology-Based, Factors, Challenging, Lecturers, Utilization, ICT, Teaching

Introduction

Education is generally one of the major instrument for manpower development. Education is an instrument 'par excellence' for socio-economic development in the Nigerian society as indicated by the Federal Republic of Nigeria (FRN, 2014) in the National Policy on Education (NPE). Different level of education has been established in the Nigerian education system to cater for various human needs and the university is one of them. The university occupies the highest cadre in the level of higher education system. The Nigerian universities have very important role to play in sustainable development in all aspects of socio-economic, cultural, political, religious and environmental development of the nation. To produce the necessary professionals and manpower for the country, the university offers different programmes and courses in various fields of studies and endeavours through quality teaching and learning, research and effective community or public service delivery. The university however, have been established with several goals and objectives as indicated by the Federal Republic of Nigeria (FRN, 2014: 39) in the National Policy on Education (NPE) and these are to:

a. Contribute to national development through high-level manpower training;
b. Provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of all Nigerians;
c. Provide high-quality career counseling and lifelong learning programmes that prepare students with the knowledge and skills for self-reliance and the world of work;
d. Reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market;
e. Promote and encourage scholarship, entrepreneurship and community service;
f. Forge and cement national unity; and
g. Promote national and international understanding and interaction.

Based on all the above goals and objectives, University education can make optimum contribution towards sustainable national development by:

a. Intensifying and diversifying its programmes for the development of high level manpower within the context of the needs of the nation;
b. Making professional course contents reflect the nation's national requirements;
c. Making all students part of a general programme of all-round improvement in university education, to offer general study

courses such as the Information Technology (IT);

d. Making entrepreneurial skill acquisition a requirement for all Nigerian universities; among others (pg.41).

Attainment of all the above goals and objectives of the universities lies mostly in the hands of the academic staff, that is, lecturers. Lecturers in the universities are important human resources and machineries responsible for effective implementation of the education policy for achievement of both educational goals and the national objectives. Lecturers always stand at the forefront of every students' learning and they are also responsible for all the teaching and learning activities which goes both inside, within and outside the university environment. Lecturers therefore, are expected to remain consistently very effective and efficient while teaching in the classroom. They should possess specific skills like the Information and Communication Technologies (ICTs) that will make them efficient in teaching in the lecture halls and rooms. As such, lecturers should make effective use of the ICT to achieve their instructional goals and objectives. Olosunde and Akinpelu (2010) observed that ICT are enabling technologies (both hard wares and soft wares) necessary for the delivery of voice/audio data/high-speed and low-speed, video, fax and internet services, using wired and wireless resources/media and associated equipment that are connected via Internet-Protocol (IP). It covers internet services\ provision, telecommunications equipment and services, information technology equipment and services means and broadcasting, commercial information and communication activities, international network, among others (Chukwuma & Aniekwe, 2011). However, the benefits of ICT in education coupled with teaching and learning are enormous. Besides, the advent and intervention of the Information and Communication Technology (ICT) has continued to have significant and positive impact in all fields and sectors of the Nigerian economy including in education. The information and communication technology (ICT) has remarkably influenced all fields of the world today. As a versatile instrument, ICT has the capability not only to engage students in instructional activities but also to increase their learning, but helping them to solve complex problems to enhance their cognitive skills (Habibu, Al-Mamun & Clement, 2012). Generally, three objectives are distinguished for the use of ICT in education: a) the use of ICT as object of study; refers to learning about ICT, which enables students to use ICT in their daily lives; b) the use of ICT as aspect of discipline or profession; refers to the development of ICT skills for professional or vocational purposes; c) the use of ICT as medium for teaching and learning; focuses on the use of ICT for the enhancement of the teaching and learning process. It is a fact that lecturers in the universities are at the center of curriculum change and they control the teaching and learning processes. Therefore, they must be able to prepare undergraduate and postgraduate students for the knowledge society in which the

competency of using ICT to acquire and process information is very important. ICT plays various roles in both the teaching and learning processes. The fact remains that the use of various ICT tools and gadgets have led to the introduction of e-learning and many other forms of learning in teaching and learning in the university (Otuka 2010).

Due to the relevance of ICT in the education system including the universities, it has become very vital that its different resources be widely adopted for teaching and learning in the field. In regards to this, UNESCO (2009) asserted that more than any other technology, ICT provides lecturers and students access to vast stores of e-learning knowledge beyond the school. Quality teaching activities in the university can take the form of off-line/ordinary computers, telephone/wireless applications, on-line/internet computers, use of scanners, printers and emails, multimedia television, multimedia projectors, digital library, ready-made courseware: CD-ROM, etc (Nwana, 2012). Thus, the benefits of ICT in teaching are enormous. Wong, Quek, Divaharan, Liu, Peer and Williams (2006) posited that technology can play a part in supporting face-to-face teaching and learning in the classroom. Habibu, Al-Mamun and Clement, (2012) opined that ICT integration is meant and should be utilized as a tool to support educational objectives such as skills for searching and assessing information, cooperation, communication and problem-solving which are important for the preparation of students for the knowledge society. Innovative use of ICT can facilitate student-centered learning and promote quality up-take of e-learning among students especially in the university (Habibu, Al-Mamun & Clement, 2012). Hence, every lecturer in the university should use different ICTs to enhance quality teaching in every course of study because it can engage the thinking, decision making, problem solving and reasoning behaviours of students. These are cognitive behaviours that students need to learn in an information age. Although ICT may facilitate independent self-paced learning, the potential of ICT may not be optimized if there is no shift in the learning and teaching paradigm. In fact, lecturers play significant role in the teaching-learning paradigm shift. They must understand the potential role of ICT in education. Also, they should become effective agents to be able to make use of technology in the lecture rooms and halls. Notwithstanding, the benefits and advantages of utilizing various ICT tools and resources in education, yet many universities and Nnamdi Azikiwe University (NAU) inclusive, are found not having sufficient ICT facilities that will enhance quality teaching and learning for their students. The poor accessibility, mobilization and utilization of ICTs in the universities have been found by most scholars, writers and researchers to be caused/responsible by some challenges.

Challenges hence as referred in this present study are obstacles, negative factors, hindrances and barriers with negative consequences which can prevent something or someone to achieve certain goals and objectives. In essences, the challenges to lecturers' utilization of ICT are such barriers and negative factors that prevent lecturers in the university from utilizing ICT in teaching which equally course impediments on

quality e-learning uptake of students. Utilization on the other hand can be termed as lecturers' easy access to effective use of ICT resources or tools in the university. It can be seen as the magnitude at with various ICTs are been deployed to support teaching and learning in the university. The challenges to lecturers' utilization of ICT as indicated by Habibu, Al-Mamun and Clement (2012), Ogbomo (2011), among others, is associated to their high cost, poor education funding, lecturers' incompetency and lack of skills in utilizing the ICT, poor electricity supply, shortage of resources and facilities in educational institutions, lack upgrade, maintenance and replacement of ICT tools, among many others. These problems can be identified based on technology-related factors also. Ogueche and Nri (2021) asserted that the government failure to effectively implement the ICT policy in Nigerian educational institutions is a very big challenge to utilization of the resources in schools. From all the foregoing, the present study sought to investigate and find out those technology-related factors challenging lecturers' utilization of ICT in the university. The technology-related based factors as observed in the previous studies of Adomi and Kpangban (2018), Habibu, Al-Mamun and Clement (2012), Ogueche and Nri, (2021), Oliver (2019) and Otuka (2010) are challenges associated with the high cost of most ICT tools which affect their procurement in the university, constant change of ICT demanding upgrading of most ICT resources, electricity challenges, among others. Due to ICT's importance in society and possibly for the future of university education, identifying the challenges to technology-based factors challenging lecturers' utilization of ICT in teaching in higher educational institutions like the Nnamdi Azikiwe University (NAU), Awka, Anambra State, becomes a crucial step in improving the quality of teaching and learning delivery. Balanskat, Blamire, and Kefala cited in Habibu, Al-Mamun and Clement (2012) argued that although the university lecturers likewise other educators appear to acknowledge the value of ICT in their institutions, difficulties continue to exist during the processes of utilization of these technologies. This present study therefore, sought to bring together the findings and the key points from a review of a significant part of the available literature associated with difficulties and challenges that lecturers are facing in utilizing the ICT in teaching-learning process. Identifying these fundamental challenges will assist lecturers and educators including the university's management and leadership to overcome these problems and become successful technology adopters. Understanding the technological-based factors challenging lecturers' successful utilization of ICT in Nnamdi Azikiwe University (NAU), Awka, Anambra State is a vital precondition for improving the utilization of ICT in teaching in the higher educational institutions. Upon this background; the study provided some important information on improving ICT utilization in teaching for the enhancement of quality teaching in the lecture halls and classrooms.

Statement of the Problem

The ICTs has been very prominent in teaching and learning in the Nigerian universities, especially in Nnamdi Azikiwe University (NAU), Awka,

Anambra State. The ICT has tremendously brought in transformation and development within teaching in the university environment. Thus, the benefits of lecturers' utilization of ICT in teaching in the university education system can never be overemphasized and therefore, should not be neglected or overlooked. It is expected that lecturers effectively and efficient utilize the ICT in teaching but preliminary observation for NAU, Awka, Anambra State, showcases that the use of ICT in teaching has not been fully integrated owing to such challenges associated with the technology-based factors. These factors are associated with the high cost of ICT, electricity issues, maintenance challenges, among others. This is confirmed by personal observation of the researchers and interactions with lecturers in NAU, Awka. The pace of ICT integration in teaching in NAU, Awka seem to be on a slow pace, requiring absolute redressing. Failure to adequately incorporate ICT in teaching, this could have negative consequences on the quality of students produced in the university. This will require curbing all the technology-based factors inhibiting effective utilization of ICT in the university. Obviously, the technology-based challenges might be contributing to the slow adoption of ICT by lecturers in NAU but the how of their contributions is not yet clear and certain. In a bid to fill the gap, this study was deemed imperative as it was to guide relevant stakeholders in taking objective steps towards addressing the problem on technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State.

Purpose of the Study

The purpose of this study is to determine the Technology-Based Factors Challenging Lecturers Utilization of Information Communication Technology in Teaching in Nnamdi Azikiwe University, Awka, Anambra State. Specific objective of the study sought to:

1. Ascertain technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State.

Research Question

The following research question guided the study:

1. What are the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State?

Hypothesis

One null hypothesis was formulated and tested in the study:

1. There is no significant difference in the mean rating of HODs and lecturers on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State.

Research Method

The descriptive survey research design was employed in order to conduct the study. This design was used to collect data and information from the participants (that is; HODs and lecturers) with a view to ascertain the technology-based factors challenging lecturers'

utilization of information communication technology in teaching in Nnamdi Azikiwe University (NAU), Awka, Anambra State. This design was employed in order to conduct a field survey and gather data (information) from the academic staff comprising HODs and lecturers from Nnamdi Azikiwe University, Awka, Anambra State. Justification for the choice of the descriptive survey research design is that; this design enabled the researchers to undergo a field study in order to collect data from a sample of large population of HODs and lecturers; and thereafter, generalize the findings in order to draw inferences and make conclusion. Nworgu (2015), opined that the descriptive survey research design are those studies which aims at collecting data from sample of a given population and describing in a systematic manner, the characteristics, features or facts about a given population. These studies are only interested in describing certain variables in relation to the population. Population for the study consisted of all the 1,964 Heads of Departments (HODs) and lecturers within 91 Departments from 14 Faculties in Nnamdi Azikiwe University (NAU), Awka, Anambra State. According to the Personnel Unit (Pay Roll), NAU (2022), there are a total of 1,964 academic staff strength within 91 Departments and 14 Faculties in NAU, Awka, Anambra State. Justification for choosing only the HODs and lecturers in this present study was because the study in particular concerns to them mostly, therefore, they were in a better position to describe the technology-based factors challenging their utilization of ICT in teaching in NAU, Awka, Anambra State. The study was conducted only in Nnamdi Azikiwe University (NAU), Awka, Anambra State. The sample size for the study comprised a total of 1,440 participants, incorporating 65 HODs and 1,375 lecturers selected from 14 Faculties in the university (NAU). The sample size was drawn employing a stratified random sampling technique. The stratified random sampling technique was employed to select the HODs and lecturers (that is, academic staff) according to their different positions, based on head of department and lecturer position. Here, the researchers randomly selected 70% of both the HODs and lecturers from their entire population from the university. Nworgu (2015) highlighted that in the stratified random sampling technique each element in the population are selected and included in the sample based on their existing characteristics in relation to their gender or male and female sexes, geographical location, education zones, positions, ranks, among others. To carry out this technique in this present study, it was convenient for the researchers to study and select samples from the entire elements that make up the population in the NAU based on their different positions (either, HOD or lecturer) and they could as well as be easily reached out by the researchers using the support of some research assistants. Therefore, the sample size of the participants selected for the study consisted of 65 HODs and 1,375 representing 70% of the entire population from the various Departments and Faculties selected for sampling. A researchers' self-developed questionnaire titled: Technology-Based Factors Challenging Lecturers Utilization of ICT in Teaching Questionnaire (TBFCLUICTITQ) which was constructed for the HODs and

lecturers, containing 5 items and designed on a 4-point scale, was used for data collection. Construction of the questionnaire was guided by the scope of the study, purpose of the study and research questions. The questionnaire was divided into two parts. Part A is an introductory section which comprises personal details and open-ended statements that elicited from the participants their positions as either HOD or lecturer and designated Faculty in NAU. Part B of the research instrument contained 5 items based on this study on Technology-Based Factors Challenging Lecturers Utilization of Information Communication Technology in Teaching in Nnamdi Azikiwe University, Awka, Anambra State. Items in section B of the instrument was arranged in one cluster in order to answer questions relating to the research question. The items on the TBFCLUICTITQ was structured on a 4-point scale weighted as follows: (a) Strongly Agree **(SA) - 4**, Agree **(A) - 3**, Disagree **(D) - 2,** Strongly Disagree **(SD) - 1**. The research instrument was validated by two experts from Educational Management and Policy Department and one expert from Measurement and Evaluation Unit, Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State. The corrections and modifications made by these experts were incorporated in the instrument before the final draft of the instrument. This is done in order to determine the face and content validity that aided the instrument to collect the requisite information/data for the study. These experts were requested to face validate the items in the questionnaire in terms of their face value, content relevance, items clarity and sentence construction. According to Nworgu (2015), validity is concerned with measurements which deals with the appropriateness of an instrument in measuring what it intends to measure, that is, it deals with accuracy and effectiveness of the measuring instrument.

Reliability of the questionnaire was established through a pilot-test sampling 5 HODs and 15 lecturers from one federal university in Enugu State, which was not part of the study. The essence of conducting a pilot-test was to avoid bias. The result obtained from the data collected was computed and the coefficient value was measured using the Cronbach Alpha method to give an internal consistency reliability (r) - value of 0.79, showcasing that the questionnaire was reliable. The reliability of the questionnaire determined the trust-worthiness, consistency and dependability of the instrument (Nworgu, 2015). Method of data collection entailed the adoption of direct, personal and hand delivery process with the respondents using five research assistants. A face-to-face contact method was deployed in this process in order to collect the necessary information from the respondents. An on-the-spot method was equally adopted by the researchers and research assistants for distributing copies of the questionnaire in order to ensure maximum recovery of the questionnaire administered. Copies of the questionnaire for the HODs and lecturers were delivered to them by the researchers and research assistants who were postgraduate students of NAU, Awka. These research assistants were instructed and briefed on how to administer the questionnaire to the respondents. This

entailed explaining properly to the research assistants' the reason for the study, likewise, the location of the Faculties and departments selected for the study. The researchers and the research assistants waited for the respondents to complete the questionnaire before retrieving them on the spot in order to obtain the highest possible rate of return. A total of 1,440 copies of the questionnaire were distributed and all of them were retrieved at a 100% rate of return. Data collated for the study were analyzed using mean scores and standard deviation in order to answer all the research questions. The decision rule for determining the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University (NAU), Awka, Anambra State, was rated of 2.50 and above. Only mean scores that rated 2.50 and above was accepted as an indication of agreeing with the statement while mean scores below 2.49 was regarded as an indication of disagreeing with the statement. The null hypothesis was tested at an alpha level of 0.05 significance using t-test statistics. The t-test statistics was used to test the significant difference between two mean distributions as showcased in the hypothesis. For the hypothesis testing, the decision rule was that wherever p-value obtained or calculated value was greater than or equal to the alpha 0.05 level of significance, the null hypothesis – H_0 was not rejected (accepted). On the other hand, a null hypothesis – H_0 was rejected wherever an obtained or calculated *p*-value was less than the alpha 0.05 level of significance. Data collated were also be coded into the SPSS (Statistical Software Package for Social Sciences) for computer analysis.

Presentation of Results

Research Question: What are the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State?

Table 1: Technology-Based Factors Challenging Lecturers' Utilization of Information Communication Technology in Teaching; N = (65 HODs and 1,375 lecturers)

S/N	STATEMENT: Technology-based factors challenging lecturers' utilization of ICT in teaching includes:	HODS			LECTURERS		
		X	SD	Decision	X	SD	Decision
1.	Poor access to internet connectivity/network problems in the university which challenges utilization of ICT in teaching	3.34	0.73	Agree	3.35	0.89	Agree
2.	Lack of stable and constant power supply/electricity which challenges utilization of ICT in teaching	3.57	0.72	Agree	3.31	0.81	Agree
3.	Constant changing nature of most ICT resources demanding their upgrading which the university cannot afford, therefore, challenging utilization of ICT in teaching	3.12	0.79	Agree	2.82	0.92	Agree
4.	High cost of many of these ICT resources/equipment which challenges their utilization in teaching	3.09	0.92	Agree	3.23	0.79	Agree

5.	Virus threat problems which challenges constant ICT utilization in teaching	2.94	0.96	**Agree**	2.99	0.96	**Agree**
	Grand Mean Score and SD	**3.21**	**0.86**	**Agree**	**3.14**	**0.90**	**Agree**

Field Survey Data (2023)

Result as shown from Table 1 above, from the mean ratings of the HODs and lecturers in NAU indicated that both respondents' responses from items 1 to 5 were rated above 2.50 of the acceptable mean score agreeing with these statements. None of the items was rated below the acceptable mean score of 2.50 by the HODs and lecturers in NAU to disagree with any of the statements. This result showed further that both the HODs and lecturers in NAU were comparable in their response on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State. The overall (grand) mean score of the HODs and lecturers is 3.21 and 3.14 respectively showcasing that both respondents reacted alike (positively) towards all the statements. Their standard deviation (SD) ranged from 0.72 to 0.96 with an overall SD of 0.86 for the HODs; and SD which ranged from 0.79 to 0.96 with an overall SD of 0.90 for the lecturers; showing small disparity in their responses. The standard deviations obtained from the responses to all the items by the HODs (SD = 0.86) and lecturers (SD = 0.90) indicated homogeneity in their responses. There were also no variations in responses of the HODs and lecturers as all the standard deviations ranged from 0.72 to 0.96 for both group of respondents.

Hypothesis: There is no significant difference in the mean rating of HODs and lecturers on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State.

Table 2: Test of Difference between Mean Ratings of HODs and Lecturers on the Technology-Based Factors Challenging Lecturers' Utilization of Information Communication Technology in Teaching in Nnamdi Azikiwe University, Awka, Anambra State

Academic Staff	N	Mean	SD	df	T	Sig
HODs	65	41.46	9.74			
				1438	-3.608	.650
Lecturers	1375	45.81	9.49			

P > 0.05

Data presented on Table 2 indicates that t-test was run to test the difference in the mean rating of HODs and lecturers on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State. Furthermore, the analysis shows no significant difference given that t = -3.608, and p > 0.05 (.650 > 0.05), hence, the null hypothesis was accepted that the difference in the mean rating of HODs and lecturers on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State is not significant.

Discussion of Findings

Finding of this study indicated that the technology-based factors were challenging to lecturers' utilization of

information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State. Such technology-based factors as: poor access to internet connectivity/network problems in the university, lack of stable and constant power supply/electricity, constant changing nature of most ICT resources demanding their upgrading which the university cannot afford, high cost of many of these ICT resources/equipment, coupled with virus threat problems were all the challenges to constant ICT utilization in teaching in NAU, Awka, Anambra State. This finding does not deviate and agrees with the studies of Adomi and Kpangban (2018), Habibu, Al-Mamun and Clement (2012), Oliver (2019) and Ogueche and Nri (2021) whose findings indicated that virus threat, power problems, software problems and shortage of proper equipment and delay to purchase equipment were the remarkable causes that made it difficult to use ICT in the teaching-learning process. Ogueche and Nri (2021) study found out that another major technology-based challenge inhibiting effective utilization of ICT in teaching in schools especially in most rural places was that there was no coverage of internet, the network providers had not covered some places within the Nigeria nation. But in those areas where they were, the monthly Internet subscriptions was exorbitant and the charges for satellite television, broadband width were unaffordable for most secondary schools. This made it difficult for many Nigerian schools and higher educational institutions to acquire and install computer and internet facilities for the use of teachers and students in their schools. Lack of constant power supply was another serious big technology-based challenge for academic staff ICT utilization in the university. Concurring with the above finding, Adomi and Kpangban (2018) discovered that electricity failure has been a persistent problem militating against computer application and use in Nigeria. Ogueche and Nri (2021) further confirmed that the issue of inadequate/lack of power supply in Nigeria is a perennial problem that more often than we are confronted with issues of fall in the national power grid to this power generation and distribution in Nigeria has not been efficient. Many schools are experiencing and suffering from this erratic power supply. Therefore, setting up computer laboratories in such schools seem like a mirage. The only remedy is to resort to a generator or an alternative solar energy supply which also came with huge cost implications in provision and maintenance. The hypothesis test indicated that the difference in the mean rating of HODs and lecturers on the technology-based factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State is not significant. Meaning that both the HODs and lecturers do not differ in their responses.

Conclusion

The information communication technology has made significant impact in the teaching and learning in the university. For many universities

with high ICT integration, this has enable them promote quality e-learning uptake among students. But the present study submits and conclude that factors such as institutional internal-based factors, institutional external-based factors, lecturers' personal-related factors, and technology-based factors were challenging to lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State. More so, the impediments from all these challenges of lecturers' utilization of ICT in teaching inhibited quality e-learning uptake among students of Nnamdi Azikiwe University, Awka, Anambra State. As such, the differences in the mean rating of HODs and lecturers on all these factors challenging lecturers' utilization of information communication technology in teaching in Nnamdi Azikiwe University, Awka, Anambra State was not significant. This situation calls for absolute redress if quality education must be enhanced in the teaching and learning situation of NAU. Thus, the recommendations made below.

Recommendations

Based on the finding of this study, the following recommendation has been proffered:

1. The University Management in conjunction with National Universities' Commission (NUC) together with financial support from the government and the private sector should curb the technology-based factors challenging lecturers' utilization of information communication technology in teaching in NAU, Awka, Anambra State.

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