



Assessment of Stakeholders Perception of the Availability and Use of Information and Communication Technology Equipment in the Management of Universities in Nigeria

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Abstract

The study was an assessment of stakeholders perception on the availability and use of information and communication technology equipment in the management of universities in Nigeria. The research design employed in this study was descriptive survey design. The population for the study comprised 138 universities. These universities include 40 Federal, 40 State and 58 Private universities, making a total of 138 universities. These 138 universities were further grouped into six geo-political zones of Nigeria namely: North-East, North-West, North Central, South-West, South East and South-South. Stratified sampling technique was adopted for the study in order to give equal chance to all sample representatives and to be able to cover all the universities across the six geo-political zones. Consequently, one university was randomly selected from each of the three groups of universities in each of geo-political zone, making a total of 18 selected universities. A purposive sampling was used to share 50 questionnaires in each of the 18 universities, which gave a total of 900 as sample size. The data obtained were analysed using percentages, descriptive statistics and analysis of variance (ANOVA) statistics. Results showed that significant differences exist in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on availability of equipment in the management of universities in Nigeria. The calculated P-Value of 0.028 is lower than the 0.05 alpha level significance. It was concluded that availability and good condition of equipment will enhance effective running of universities in Nigeria. It was recommended that university management should provide ICT equipment and always keep them in good condition.

Keywords: Information and Communication Technology, Management, Universities.



Introduction

The use of conventional teaching strategies which is characterized without the use of ICT gadgets in our modern universities has become a concern. The above scenario may be one of the factors responsible for the decline in national productivity. ICT streamline administrative and reporting processes, help to provide the delivery vehicle for innovative instructional and staff development approaches. In the context of this study, Information Communication Technology (ICT) is the technology that provide access to information and communication for the improvement of quality education and learning outcome. ICT has many tools which help in facilitating information for achieving the efficient educational system. For developing countries, ICT has potentials for increasing access to and improving the relevance and quality of education at all levels in both public and private educational institutions. The introduction of information and communication technology gadgets may be a force to reckon with in the effort to the above challenges. It is believed that the introduction of ICT into management of universities clearly changes the way education is conducted (Adeyemi, 2012:48-262).

According to Singh (2008) availability of ICT equipment in any university is crucial. This is because advances in ICT facilitate advancement and improvement in university education. For example, availability of ICT equipment in Nigeria universities will make lecturers, administrators, students and ICT instructors to have access to a lot of opportunities on the internet which can be downloaded and print from a web site. Therefore, the importance of technology availability and good condition of ICT equipment in our universities should not be ignored. This is because availability of ICT as a tool in the university management is of great gain to the university and good condition of ICT equipment have led to better research work, provides better evaluation of institutional performance for curriculum planning. It also helps in analyzing data quickly and reduces the stress of manual searching for information (Fasanmi, 2013)

The role of information and communication technology according to Baba and Odiba (2015) has



contributed immensely to the transformation of the educational system. The author asserted that the above “has the potential outcome of economic development, manpower improvement and socio-economic awareness” in Nigeria. ICT according to Salau (2021: 244-262) can be defined as “computer-based tools and techniques for the gathering and information”. It involves the use of projectors, computers, electronic machines, electronic display, computer games, internet facilities and other electronic gadgets. Oghenovo (2016:5-9) demonstrated that “teaching and research in tertiary institution now demand the use of high caliber ICT infrastructures and facilities to keep abreast with current and recent development”.

The effective research and teaching and learning the use of ICT machines and gadgets has become indispensably necessary. Student need to interact with these materials in the university system, lecturers needs ICT devices for updated research and community development to add to teaching and learning. Omodara, (2010) argue that there is the need for ICT devices across Nigerian universities for effective teaching and learning and for proper research development to enable Nigerian universities compete favourably with other world class universities. Wole (2017:13-33) added that “ICT are affecting the way university education is delivered and research conducted. They are currently in use in Nigerian universities for information access, library and for research and development.” Hence the need for availability of ICT gadgets in Nigerian universities to achieve the aforementioned objectives. Okorieocha, et al (2019), in fact, for teachers to be effective in this present era of ICT and to achievement the educational objectives comprehensively, there is the need to employ ICT materials and gadgets especially in our universities.

The research work of Odionye (2016) revealed that ICT has become an indispensable education tools in Nigerian universities for teaching, learning, and personal development of both staff, students and other stakeholders in Nigerian universities. Eze, et al (2018) opined that “the emergence of information and communication technology and the ubiquitous connectivity of the internet and the networks improved man’s ingenuity and the opportunities given that society



consciously depend on real-time information to be proactive and to discount the effects on environmental changes". Information and communication technology has a profound impact on society and the ways in which we conduct business and financial matters. The revolution that began in 1990 has brought ICT into many homes and schools. The main condition for achieving success in the world of ICT is making ICT infrastructures available in all universities (Saxena, 2006). Another main condition according to Sofoluwe (2003) is the availability of good teachers, who must be qualified at two levels as educators and trainers. The teacher trainer is a specialist that trains other teachers in the use of digital technology in the classroom. The teacher will in turn train their students.

Availability of ICT equipment is very vital in the growth and use of ICT in the universities (Singh, 2008). By now universities in Nigeria are supposed to be using computers as tutorial devices for basic skills instruction and as objects of study in computer literacy. At this 21st century, students in Nigeria should be using computer as learning machine in order to let them develop their intelligence and create their knowledge by developing tools for words processing (Omirin, 2007; Otaghara *et al.*, 2012), unfortunately, it is not so in most universities in Nigeria.

Availability of ICT infrastructures in school will help digital technology in education and continues to provide computer accessibility. Availability of ICT equipment couple with the good condition will help to foster education reform. Low availability of ICT equipment will result in decline in administrative effectiveness (Fasanmi, 2013). Infrastructure is central in achieving the goal of digital inclusion, enabling sustainable and affordable access to ICT (Mohammed, 2006). Not only is it possible to work with distance learning and achieve a closer collaboration between different universities, ICT also paves the way for a new pedagogical approach, where students are expected to play more active role than before (Alabi, 2000). Success of open and distance learning depends largely on well-established and properly maintained ICT infrastructures. The ICT in education has been a welcome development even in the classroom (Bassey *et al.*, 2006). Good management has a strong relationship with adequate availability and utilization of ICT facilities.



This entails that the more the good management of ICT facilities by the university management the better would be their effectiveness. The use of internet, besides reducing the cost on university management and reducing inconveniences, the same information on the internet can be mailed to all departments without having to send it individually (Alter, 2004; Babalola, 2009).

Oshinioke and Adekunmisi (2012) were of the opinion that making ICT facilities generously available and in good condition in all Nigeria institution of learning, especially in the universities is a task that must urgently be done by the government, stakeholder and the institutions.

Furthermore, Bakare, Onah and Okereke (2018) opined that the rate at which university students attain academic excellence therefore depends primarily on the mode of teaching, personality of lecturers and the teaching methods and strategies adopted by lecturers. It is worth noting, therefore, that when university teachers are well-grounded in their various areas of specialization, adopt appropriate modes of instruction, are knowledgeable in the usage of modern educational technology tools for instructional delivery as well as taking part in continuous professional development for career advancement and embarking on quality research, they will be well-positioned to deliver effective lessons to students capable of creating a positive impact using flexible modes of instruction, such as face-to face interactions, on-line teaching, and open-distance learning among others. A 21st century university teacher, therefore, is expected to be conversant with all modern instructional delivery modes applicable to university education across the globe, so as to apply them appropriately when situations demand global best practices. It is in the light of the numerous advantages associated with availability of scientific technological innovations that this research was carried out to Assess Stakeholders Perception on the Availability and Use of Information and Communication Technology Equipment in the Management of Universities in Nigeria demand global best practices.



Statement of the Problem

Access, availability and use of ICT has a lot of benefits for the university communities as it can better teaching-learning processes and research concerns. In recent times, administrators, lecturers and students access, use and availability of ICT facilities for learning purposes is of crucial importance. Despite this, many stakeholders and students in Nigerian universities are still in the habit of patronizing the traditional sources of information rather than ICT facilities. This may have due to various challenges militating against the availability, access and utilization of these facilities. Some of the technological equipment are not adequately available in Nigeria universities. For example, few ICT equipment, such as projector, TV, camera, printers, scanners just to mention a few are available in every department in our universities. Few ICT equipment that are available are not functioning well or obsolete as a result of poor maintenance culture. None availability of facilities is a major constraint faced by administrators, lecturers and ICT instructors in the effective management of universities in Nigeria.

In Nigeria, there has not been explicit policy on ICT. The national policy on education does not give any guidelines on school technology plan. National policy on education cannot adequately take care of the need of the Nigerian educational system. There is the need to revise the Nigerian national policy on education such revision should be taken to involve stakeholders in the area of education so that they can ensure that the policy covers issues about ICT and learning through ICT. Indeed, explicit policy on ICT in education should provide guide to development of ICT infrastructure. This is because the available ICT in most of these universities are grossly inadequate. It was observed that most university students still visit internet cafes off campus because of too much demand on the internet on campus. The bandwidths shared on most of these systems at cyber cafes are still low; hence much time is till wasted on internet browsing. Since government policy has been the deregulation of telecommunication industry ICT infrastructures are therefore mostly provided by private entrepreneurs for business purposes.



This study therefore would assess stakeholders' perception on the availability and use of information and communication technology equipment in the management of universities in Nigeria

Objectives of the Study

The objectives of the study were:

1. To determine the level of equipment availability on the management of universities in Nigeria.
2. To ascertain whether ICT equipment are in good condition for the management of universities in Nigeria

Research Hypothesis

The following hypothesis were tested.

1. There is no significant difference in the opinions of administrators, lecturers and ICT instructors on the impact of availability of equipment in the management of Nigeria universities.
2. There is no significant difference between the opinions of administrators, lecturers and ICT instructors on good condition of ICT equipment in the management of Nigeria universities.

Methodology

The research design adapted for the conduct of this study was a survey design, and the instrument used is questionnaire. The population for this study comprised all the one hundred and thirty eight (138) universities in Nigeria as of the time of this study endeavour. The universities were grouped into three categories namely: Federal universities, State universities and Private universities. The universities were further grouped into six geo-political zones namely: North East, North West, North Central, South East, South West and South-South. One university each was randomly picked from each category in each geo-political zone. This gave a total of eighteen universities as our target population. The participants were the administrators, lecturers and ICT instructors of each university.



A total of 900 questionnaires, 50 each in the 18 universities were distributed. The questionnaire was well validated and the pilot test was carried out in selected universities different from the target institutions. The cronbach alpha reliability coefficient was used (Hassan, 1995). The inferential statistic adopted was analysis of variance (ANOVA) to detect the differences and brings out the causes of such difference to further check the extent of the significance differences with the degree of freedom at 0.05 level of significance.

Results

Table 1: Analysis of Variance Statistics on Differences in Opinion of Administrators, Lecturers and ICT Instructors on the Impact of ICT on the Availability of Equipment in the Management of Universities in Nigeria.

	Sum of Squares	df	Mean Square	F	Sig.
'Between Groups	202.050	2	101.025	3.628	.028
Within Groups	7322.765	263	27.843		
Total	7524.816	265			

The group sizes were unequal. The harmonic mean of the group sizes was used type 1 error were not guaranteed.

Outcome of the analysis of variance (ANOVA) statistics revealed that significant differences exist in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on availability of equipment in the management of universities in Nigeria. Reasons being that the calculated p value of 0.028 is lower than the 0.05 alpha level significance, while the calculated F-value of 3.628 was found to be higher than the 2.60 F- critical value. However, the implication of this result is that, we are to reject the null hypothesis and retained the alternative hypothesis.



Table 2: Scheffe post hoc Multiple comparison of mean statistic on differences in opinions of administrators, lecturers and ICT instructors on the Impact of ICT on the availability of equipment in the management of Universities in Nigeria.

Status	N	Subset for alpha = 0.05	
		1	2
ICT Instructor	256	47.0678	47.5189
Administrator	318	47.5189	49.1188
Lecturer	321	.860	.152
Significance	895		

Means for groups in homogenous subsets are displayed
a. Uses Harmonic mean sample size = 82.681

The Scheffe post Hoc comparison statistics further confirm that the ICT instructor and administrators had the least mean opinions placed in the least subset 1, while lecturers had significant higher mean opinion placed in the significant higher subset 2. Therefore, the null hypothesis which states that there is no significant difference among the opinions of administrators, lecturers and ICT instructors on the impact of ICT on availability of equipment in the management of universities in Nigeria was consequently rejected

Table 3: Analysis of Variance Statistics on Differences in Opinions of Administrators, Lecturers and ICT Instructors on the impact of ICT on the Equipment are in Good Condition in the Management of Universities in Nigeria.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	251.079	2	125.540	1.268	.283
Within Groups	26043.703	263	99.025		
Total	26294.782	265			

The finding further revealed the outcome of the analysis of variance (ANOVA) statistics shows that significant differences does not exist in the opinions of administrators, lecturers and ICT instructors on the impact of ICT on equipment are in good condition in the management of universities in Nigeria. Reasons being that the calculated p value of 0.283 is greater than the 0.05 alpha level significance, while the calculated F-value of 1.268 was found to be lower than the 2.60 F- critical value. The implication of this result is that, we are to retained the null hypothesis and reject the alternative hypothesis.



Table 6: Scheffe post Hoc Multiple Comparison of Means Statistics on Differences in Opinions of Administrators, the Lecturers and ICT Instructors on the Impact of ICT on the Equipment in Good Condition in the Management of Universities in Nigeria.

Status	N	Subset for Alpha = 0.05
		1
ICT Instructors	256	67.6441
Administrators	318	69.4717
Lecturers	321	70.2277
Significance		.

Means for groups in homogeneous subsets are displayed.

a. Used Harmonic Mean Sample Size = 82.681.

b. The group sizes were unequal. The harmonic mean of the group sizes was used. Type I error levels were not guaranteed.

The mean opinion concerning the opinion of administrators, the lecturers and ICT instructors on the impact of ICT on equipment in good condition in the management of universities in Nigeria are 69.4717, 67.6441 and 70.2277 (Table 4). Results of the analysis of variance (ANOVA) statistics revealed that there was no significant difference in the opinions of administrators, the lecturers and ICT instructors on the impact of ICT on equipment in good condition in the management of universities in Nigeria. Reasons being that, the calculated p value of 0.283 is higher than the 0.05 alpha level of significance, while the calculated F value of 1.268 was found to be lower than the 2.60 F critical value (Table 5). The Scheffe Post Hoc comparison statistics further confirm that these means are not significantly different as all the three means were placed in the same subset (Table 6). Therefore, the null hypothesis which states that there is no significant difference among the opinions of administrators, the lecturers and ICT instructors on good condition of equipment in the management of universities in Nigeria was rejected



Discussion

In general, the result revealed that availability of ICT equipment would facilitate university ICT development which will further play a significant role in building ICT knowledge based universities in Nigeria. This result is in line with the findings of Challo *et al.* (2005), Adeyemi (2012) and Fasanmi (2013) who were of the view that availability of ICT equipment will enhance the effective administration of various schools in Nigeria.

Although there were also divergent opinions of the three groups of respondents on availability of equipment in the management of universities in Nigeria, the opinions of ICT instructors in this study is in line with the findings of Mohammed (2006) who found that low availability of ICT has negative impact on the development of education. On the other hand, while the opinions of lecturers and administrators correspond with the views of Omirin (2007) that availability of ICT equipment has positive impact on development. This implies that the more available ICT facilities in the universities the better the effective management in universities in Nigeria. Therefore, if ICT facilities are not readily available, effective management of universities in Nigeria could be greatly jeopardized.

All respondent had similar opinions on the impact of ICT on good condition of equipment in the management of universities in Nigeria. This implies that, if all ICT equipment are in good condition, there will be increase efficiency and performance of administrators, lecturers and computer instructors, and consequently, better performance and management of universities in Nigeria (Adeyemi, 2012). It was concluded that availability and good condition of ICT equipment will enhance effective running of universities in Nigeria. It was also recommended that university management should provide ICT equipment and always keep them in good condition.



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